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**The UK scheduled express coach market – its economic structure and
consequent entry, exit and operation by small and medium firms**

By
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A thesis submitted in partial fulfilment of the requirement of the University of
Westminster for the degree of Master of Philosophy

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Abstract

Following deregulation of the UK inter-city coach market through the 1980 Transport Act the network is now dominated by two firms giving cause to question the success of the policy and the processes enabling competitive freedom. A policy cornerstone was contestability, and though market entry by small and medium sized coach firms in the UK has not been sustained in large quantities, deregulation has arguably been successful in maintaining low prices and stimulating innovation and quality improvements. The research examines potential reasons for the lack of multiple firm activity in the UK given the freedoms afforded by the market structure and tracks changes in the market. Consolidating early academic work and filling knowledge gaps with non-academic and trade press data, the research also outlines economic market structures that characterise the market across the research period and which have influenced the success of deregulation. The research compares subsequently liberalised European markets with the UK, examining factors that have stimulated and suppressed market entry. The conclusions focus on factors that are critical to market success, such as: the requirement for a comprehensive network to maximise efficiency and reach; strong demand in both service directions; brand awareness (local level and/or nationwide); e-commerce platforms, and financial resources to mitigate losses while building market share. The research finds that entry by small and medium sized firms can only be sustained if at least one of these factors are present. In parallel the research demonstrates movement through several economic structures by each market, in-part meeting objectives set by Governments, and results in a cyclical model to show the likely lifecycle of a liberalised inter-city coach market. The research finds that settled state structures have provided such freedom that large firms may now more easily compete (retaliate) or change business models (switching the main role of competition away from the open market to new monopsonistic sub-markets) with monopoly control remaining in the open market - a policy failure perhaps but maintaining the mode as a viable competitor in the public transport mix. The main research finding is how e-commerce has shaped liberalisation, shortening early competitive phases, altering travel behaviour, and raising customer expectations – all creating new barriers for smaller firms but seeing an increase in use, reach and coverage for large firms and new opportunities for 'virtual' providers.

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Authors Declaration

I declare that all the material contained in this thesis is my own work.

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Introduction

The liberalisation of inter-city coach services across Europe has been continuously evolving over a period of 35 years. Applied to successive European markets, it has often followed periods of state control and policies designed to protect passenger railways. In most cases, liberalisation reverses this protection opening direct inter-modal competition as an eventual, if not immediate, outcome. Furthermore, governments have long seen liberalisation as an approach to reinvigorating ailing markets; achieving economic efficiency through free-market economics; moving costs away from the state, and; enabling private entrepreneurship to make investments in equipment and technology that may not otherwise be made. The cornerstone of each government's approach has been contestable market theory. This is a process used to help the market regulate itself through competitive threat, facilitating competition to ensure that social welfare will be maximised, and profits not rise above normal levels.

Based on the UK experience, and more recent liberalisations across, the research has focused on one core hypothesis;

- Given the freedoms allowed for market entry and exit through the 1980 Transport Act why is there little or no activity within the UK inter-city coach market by small and medium sized coach operators?

Work to answer this has seen additional sub-hypothesis emerge as follows;

- Is the current UK market a demonstrable success of contestable market theory (CMT) but a failing of Government objectives related to choice and quantity?
- Has the resultant UK market structure led to an internal monopsonistic market structure within a wider external monopoly or oligopoly market structure?
- What critical factors are required prior to or post liberalisation to enable long-term competition to occur?
- Following examination of sequential liberalisations across Europe what similarities exist and what lessons can be drawn from each process?

In Europe, the UK was the first country to pass legislation to deregulate the inter-city coach market, doing so in 1980 and therefore seeing the operation of deregulated long-distance coach alongside state operated railways until privatisation in 1997. Notably however, the coach network prior to deregulation had already moved through several market structures, including nationalisation. Due to several policy and law changes determining the operation of domestic road public transport a static network of coach services giving extensive UK wide coverage existed by 1980. These were protected by quantity restrictions and licensing requirements on each long-distance route. This was overseen by a public body and many of such routes were operated by the nationalised (state) operation.

In 1980 the situation changed with the Transport Act opening the market to competition in one step, allowing supply and demand to be self-balancing through free-market forces. The planned benefits of this policy were to: create a platform which stimulated entrepreneurial activity; widen public choice; keep prices low (in-check through competition), and; ensure profits were limited in the long-run to normal levels through contestability. Upon deregulation the static nature of the network changed overnight (for at least the short-term). A diversion of resources to core corridors by the incumbent, National Express, prior to divestment from state ownership saw a consequential shrinking of network coverage. This was coupled with unrestricted changes to schedules, routes, and fares prompted by direct competition from individual firms on single routes and a consortium offering a limited competing network based heavily on fares competition over service frequency.

Initial competition subsided within five years of deregulation with much single route competition fading away earlier through competitive attrition or mergers with National Express - these competitors being mainly small to medium sized firms. The consortium, British Coachways, who competed at a strategic network level also ceased after three years following aggressive competition from National Express and to a lesser extent British Rail.

From the late 1980s through to the early 2000s National Express' position remained largely unchallenged. Although contestable, the UK market was, and remains, characterised by a highly price-elastic passenger market. This has provided little encouragement for new competition at the smaller firm level due to low returns compared to the costs of entry - demonstrated by the lack of activity when National Express fares rose, and ridership declined in the 1990s.

More recently advances in digital technology and e-commerce have allowed new competition at the strategic level with Megabus entering the market in 2003, but only able to do so with hefty financial support from its parent firm and global transport provider Stagecoach Group plc. Indeed, e-commerce has gone a long way to removing residual deregulation barriers for all potential entrants and further advances are now prompting a new wave of 'virtual' providers to enter the market at low cost but with a continued focus on fares competition against major operators in the current oligopoly market. However, with dominant firms and low financial returns persisting it is arguable that few incentives or opportunities for small and medium sized firms acting in their own right exist in the UK market, and indeed anywhere where similar pre and post deregulation conditions exist.

However, in support of the process and current market in the UK are: dominant firm growth; rail competition (rising standards and lowering fares); product and service innovation (all modes); dynamic pricing; retention of good profit margins by established major firms across the deregulated period (pointing to a healthy market with continued loyalty); some ongoing niche market successes by smaller firms in the face of competitive headwinds, and; adoption of emerging technologies enabling greater cost efficiencies. These are evident in the UK, and other studied markets, and for the UK point towards a well-functioning market in line with original Government policy aims in 1980. With this experience in mind the research seeks to identify the role of the smaller firm in the domestic inter-city coach market. It looks to identify their future as markets move forward and comment on the success of policies designed to reinvigorate markets by comparing pre and post deregulation situations in the UK and Europe.

Successive European liberalisations have arguably learnt from the UK. In part responding to localised funding and ownership pressures, these markets have often been liberalised over more stages. Similarly, to the UK each has been ahead of rail privatisation and unlike the UK most remain fully or partially in state control, creating difficulties between private and State funded competition which has not been fully addressed in any market - even within the UK where rail privatisation has progressed the most.

Observations of competitive processes in the UK and Europe show that most new entrants use 'home' market knowledge to try and find a foothold on volume corridors, believing there to be room for multiple firms. However, contestability, allows existing firms in the market to react to new entry, forcing new entrants to exit the market early through predatory pricing, sometimes at the expense of short-term losses. This is a weakness of the competitive process that is exacerbated for smaller firms by their lack of penetration into the outbound market (e.g. from London in the UK market) where this market is not their 'home' market. In these cases, the firm is an unknown brand with too few resources to ensure perfect knowledge for consumers at both ends of the route and as such failing to meet the perfectly competitive market conditions policies strive for. A juxtaposition therefore exists which creates the argument for further study of the market regarding market structure theory. Contestability is a process and seen as an alternative to static theories that assume competition. Instead it facilitates competition, opening the market to the opportunity for free-market activity and balancing supply and demand by the threat of competition. This is designed to ensure normal profit levels and easy market movement, but when the former fails due to incumbent complacency 'hit and run' competition by new entrants can occur - the benefit being long-term balancing of the market to normal levels of price and profit after a short period of turbulent market operation. As this approach is risky and often short-term the majority of smaller firms that may perform this are deterred from actual market entry leaving incumbents to instead carefully strengthen their position.

In addressing the resultant role of the smaller firm research examines economic market states and the development of exemplar markets to understand if the lack of small and medium sized firm activity is;

- (a) simply symptomatic of the strength of incumbents to lever price-based market power supported by the freedoms of contestability, or;
- (b) a wider failing of deregulation and the rules for inter-city coach operation that may be remedied by learning lessons from subsequently liberalised markets and seeking further changes to operating conditions.

In answer to this a review of market structure movement between exemplar countries has created a set of critical factors that when exhibited facilitate a healthy and competitive market. This is relevant for markets that are yet to liberalise and for emerging technologies and policy updates in already liberalised markets, where the original process may now be stagnating, or possibly failing.

The timing of the question regarding market entry is also pertinent. Currently the European market is undergoing significant change following the widespread introduction of e-commerce but seen in the UK from the early 2000s. The use of e-commerce has provided a viable and cheap platform for firms to sell their product to vast groups of customers. It can be categorised into two forms; 'actual' and 'virtual' with examples being the rapid expansion of new market entrant FlixBus across Europe as an 'actual supplier', and the emergence of next generation 'virtual' service providers, such as Sn-ap (pairing public demand to viable coach paths) and Zeelo (a crowd sourcing app currently for corporate customers) in the UK.

Research shows that in each category small and medium sized firms play a sub-contractors role. While keeping these firms gainfully employed and utilising their skills and capacity, this does prevent them from directly competing for passenger traffic by keeping them at arms-length from the detailed mechanisms of dynamic service management. While this outcome realises some aims of deregulation it does fail to achieve direct independent competition at a multi-operator level.

The emergence of e-commerce has forced established firms to overhaul their business models - to drive forward innovation and improve the customer's digital access to the network while maintaining low prices but resulting in lower direct competition due to the power this tool gives to larger firms who are sufficiently resourced to employ it.

As each market has liberalised notable lessons have been learnt; emergence of e-commerce-based competition has forced quicker market consolidation; continued emphasis on brand has been supported more effectively by digital innovation, and; the 'reach' of the coach mode (knowledge of its presence, network, and brand) has increased significantly. However, this has also created new barriers for firms - the free-market approach accommodating development but still potentially hindering complete access freedom.

Research Definitions

The following section outlines briefly several important definitions that relate directly to the research undertaken. These are designed to assist the reader in understanding the author's intentions and rationale throughout the research document.

- i. The research defines 'market entry' as supplying all elements of inter-city coach operation that a passenger requires across a journey. This includes vehicle and crew resources, booking and ticket sales facilities, and marketing and public awareness.
- ii. Small firms are defined as those up to 10 vehicles and medium as those over 10 (but less than 25). Firms with over 25 coaches are large in the UK context.
- iii. An express or long-distance scheduled coach service is one which carries passengers at separate fares and across longer distances than local or commuter buses. Each country may define the conditions for an express service with different figures and metrics but in all cases stop to stop distances are a typical classification.
- iv. Long-distance road transport passenger trips are academically defined as journeys over 50 miles / c80km (Dargay, 2010) with this definition drawn from the National Travel Survey (NTS). However, under The Act (UK) the distance that determines an express service is a minimum distance between stops of 30 miles. Each studied market has differing distance rules, and these are shown in Chapter 8 Figure 23.
- v. A coach is a vehicle across two or three axles of up to 12 metres built for the carriage of passengers over longer distances with high capacity for people and luggage (this being stored under the floor and/or at the rear) but carrying no standing passengers. They can be double-deck or articulated and up to 15 metres under EU regulations.

- vi. Short term in the context of the research period is deemed to be the first ten years after any deregulation event. Medium term is a further ten-year period after this, and long-term is any period thereafter.
- vii. Within the research document the terms 'inter-city' and 'express' are interchangeable for all modes and describe non-stop or limited stop long-distance services.
- viii. Within the research document the terms 'deregulation' and 'liberalisation' are interchangeable, and both describe the same relaxing of market conditions and the promotion of a free-market economic state focused on a contestable environment.
- ix. Within the context of the UK, NBC refers to the National Bus Company covering England and Wales, with the SBG being the Scottish Bus Group.
- x. All markets are described and compared in their domestic form, meaning only services operating within national borders. International services are not considered.
- xi. The 1980 Transport Act is referred to as The Act periodically through the research document.

Methodology

With deregulation of the UK inter-city coach market occurring over 35 years ago there is a significant period from which to collect secondary level data. It should be noted that throughout the research the terms 'deregulation' and 'liberalisation' are interchangeable. However, although a large level of research was conducted in the years immediately following the 1980 Transport Act focusing on the immediate effects of the policy change and free-market environment, little continued in following the years. This information gap was further exacerbated with the cessation of specific express coach data collection by the Department for Transport (DfT) by the early 1980s. From this period all non-local bus data was consolidated into a single category (also including contract services, excursions, and tours) making continued tracking of scheduled 'express' miles and ridership difficult without access to data provided by the companies themselves.

More recent market liberalisations in Europe have stimulated new academic research following the developments of each market post-liberalisation and, in some cases, this has referenced the UK and its changing market structures and performance as comparators to newly emerging situations in each European example.

Significant issues in undertaking this research have centred on the availability of data. This has been in regard to identifying trends in operated miles and passengers carried since each deregulation event, with data most difficult to produce for the UK. In each market, data is commercially sensitive as the market is subject to competition. While data is available for operations prior to liberalisation, the period following the change in conditions is very turbulent, subject to far fewer requirements for operational information (save for France), and dynamic in terms of pricing. With all data being secondary, it has been a requirement of this research to carefully review and combine information gained from industry and academic work to form a composite picture of each market.

To answer the research hypothesis (and sub-hypothesis) the work has followed three approaches;

1. A review of written materials relating to the UK market at two levels;
 - i. A review of academic materials produced before and after deregulation of the domestic inter-city coach market in the UK to bring information on this market up to date and within one place. This was important given the lack of analysis conducted after the 1980s save for periodic market updates by Robbins and White in (1986 and 2011), Robbins (2007), and White (1995).
 - ii. A review of non-academic books, articles, and internet information. This was important to provide a historic context to the academic work and to fill knowledge gaps in market structure and performance from the 1990s. Using these sources, it has been possible to record developments over time in the UK market - from the first scheduled coach service in 1925 by Bristol Greyhound (Bristol to London via scheduled intermediary cities and towns) through to present day networks operated by major firms - mapping this against market structure theory (their development, conditions, and change process).
2. To allow analysis of market developments in the UK (and selected European cases) the second approach is a review and application of economic market theory. This focuses on the *raison-d'être* of the 1980 Transport Act in the UK to use contestability to achieve a free-market outcome for inter-city coach services. This also tests policy changes regarding the removal of quantity restrictions and protection of the railways. The process of contestability is examined and found not to be a static long-term market state but an 'enabling process', helping markets move through traditional structures that define industry. Each traditional market structure is examined; its conditions outlined; its use in industry (and within road transport) documented, and a critique completed. Other less traditional concepts are also examined where the research has identified these. The result has been to understand the level of economic structure change within the market and evidence unique structures such as monopsony and variations to traditional oligopoly.

3. Using case study material from liberalised markets across Europe to understand how time and external market developments have affected market change and structures. The purpose is two-fold; (a) to compare and contrast the markets with the UK, and (b) to identify common lessons. Results may then inform liberalised markets as they develop further and, still-to-liberalise markets as they consider this policy. Markets were selected to represent a span of liberalised markets over time following the UK and were chosen where information concerning the process and outcomes was available to ensure that enough contextual and numeric data was available. Sweden and Norway were early markets to liberalise - representing the 1990s - 2000s. Following a gap in activity, Germany and France liberalised at similar times, but in differing ways (2013 and 2015), demonstrating lessons learnt from historical processes. In all cases rail, its ownership and operation prior to and after inter-city coach liberalisation, was outlined. Rail is the main competitor in all cases to coach but operates across varying terrains and network complexities and was a useful comparator - also pointing to potential reasons for success or failure in each market.

In all approaches there are limitations to the data. The process of liberalisation creates a competitive market place and, therefore sensitive data. With no primary data collection undertaken in testing the original hypothesis, such as interviews with industry managers or passenger surveys, the data and information used has been secondary, The main reason for the use of this data has been the completion of the work at MPhil Stage; during the research there has been a switch in emphasis away from understanding the continued lack of market entry by smaller firms due to issues of commercial sensitivity and the author's role within National Express, compromising primary data validity. Instead, a retrospective market review and commentary on the UK deregulation process compared with later market liberalisations has been conducted using published information to remove sensitivity barriers.

To conclude on each market and the comparisons between them, secondary data has been worked into a composite format with variances noted. Data for patronage has been gleaned predominantly through academic work and the trade press. However, company profitability has not been used as a proxy to success given the often multi-disciplinary nature of the main firms within the market and limitations in sectioning purely inter-city operational data from annual company reports.

Whilst some firms, such as National Express, provide annual reports by operational division: most recently, in 2017, the UK express coach business made a £34.2m profit on revenue of £287.7m, a margin of 11.9% (National Express Annual Financial Statement, March 2018). Other firms are not so specific, with the activities of Megabus (National Express's main competitor in the UK) having its accounts consolidated within its wider Stagecoach UK parent business. Therefore, comparisons between firms' success based on profitability are difficult assess and the research has instead used proportional market share (driven by passenger journey information) to comment on the performance of the market and firms within it.

Chapter 1 – Perfect Competition and Contestability

1.1 Overview

Express coach services are defined as operating an advertised route with passengers paying separate fares and services operating to defined times, journey lengths, and geographic paths. Freedom to enter this market by any firm has been in place in the UK since 1980 and more recently in several mainland European countries. However, the research seeks to understand why, given these freedoms, little market entry has occurred in recent years (in the UK) and, at deregulation, few new services were sustained by small and medium sized coach firms.

Freedom for market entry and exit was provided through the process of deregulation. Seen as providing stimulus for increased competitive activity amongst private companies, deregulation is defined as;

“The removal of controls over economic activity which have been imposed by the government or some other regulatory body” (Pass, 1993, p125).

This differs subtly from contestability, which is a tool that facilitates a change in market state usually requiring a change or removal of market rules to make entry and exit significantly easier.

Through the 1980 Transport Act (the Act) the government aimed to use deregulation to create increased competition, social welfare (through greater passenger choice), and efficiency by creating a contestable environment (Robbins and White, 1986). This would see the removal of certain barriers to entry and exit for market actors, the easing of operating restrictions for new and existing firms to meet travel demand, and through this process, allowance of the supplier and consumer to place the market in equilibrium in terms of price and quantity through ‘trial and error’ market entry and product differentiation; achieving long-term sustainability of supply.

The process of using contestability to aid deregulation provides the opportunity to allow the market to get as close as possible to the utopian concept of perfect competition. In this way, the market will move to a long-term structure which is 'free-market' in nature, but which allows for some conditions to remain that may not otherwise be able to be removed, for example non-homogenous products.

The central hypothesis to the research seeks to understand the lack of observable sustained activity by small and medium sized coach operators in the scheduled express coach market following the freedoms afforded through deregulation of the market and the change in entry and exit conditions allowed through the application of contestability over 35 years ago.

It is important to understand the market conditions and health at the time of deregulation and the economic concepts and potential outcomes which prompted policy makers in the late 1970s to alter the market operating conditions for long distance coach travel and create the significantly more relaxed market structure that continues to exist in the UK.

Considering the neoclassical theories of industrial organisation and applying these to the various stages of UK express coach market development; early market operation, through nationalisation, deregulation, and finally the current day market, it is possible to conclude on the success of deregulation policy and comment on synergies with comparable markets.

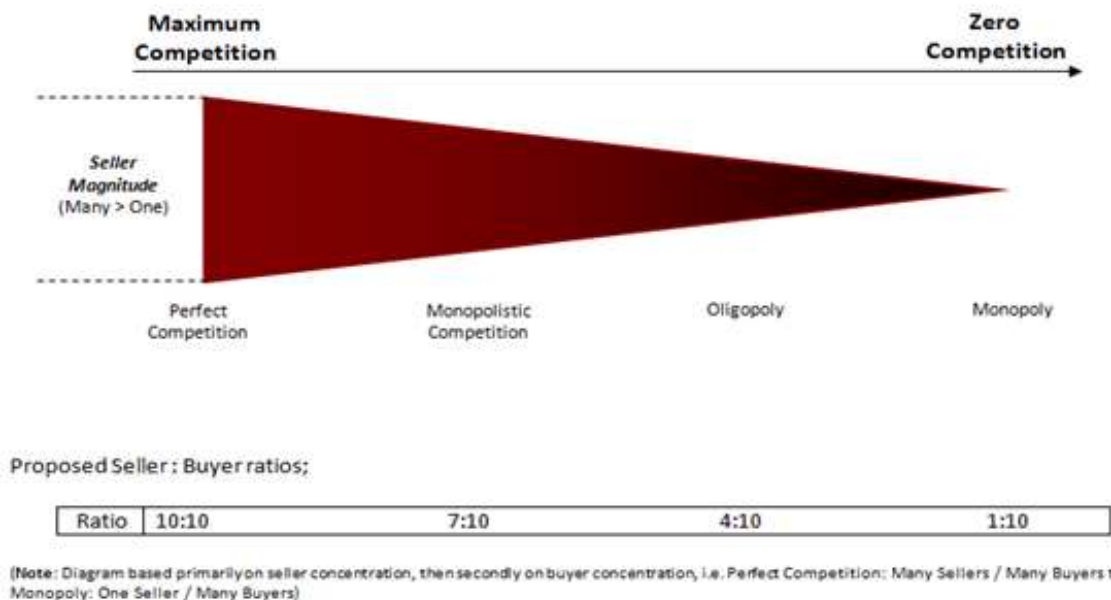
This chapter focuses on the main deliverables promoted by the 1980 Transport Act; deregulation and contestability within the market place and assesses the prerequisites and suitability for their application to the express coach market in the face of the utopian market theory position of a perfectly competitive market.

1.2 The market structure limits of the Act

The aim of the 1980 Act was to experiment with the application of free-market economics in the public transport industry. The Act focused on opening the scheduled express coach market, at that time regulated, to competition - moving the market structure as far across the market theory spectrum as possible.

Figure 1 below compares neoclassical market structures in terms of the buyer to seller ratio, allowing comparisons to be made. In simplistic terms, the process of deregulation seeks to take a monopoly (right) as far towards perfect competition (left) as possible with movement through structures stimulating competition, product innovation, choice, and price efficiency for the consumer. Through the Act it was desirable to have a structure that allowed demand to create allocative and productive efficiencies for the supplier with this facilitated through a contestable market place - attracting new market entrants and allowing incumbent firms to react to entry and competitive opportunity more easily (Robbins and White, 1986).

Figure 1: Buyer to Seller Market Structure Spectrum



In Figure 1 contestable market theory arguably sits anywhere from 9:10 to 2:10 in the 'seller-to-buyer' ratio. It is a mechanism to facilitate the development of a market through the actions of buyers and sellers. It allows each market and sub-market to settle in equilibrium at any point in time by reducing the barriers to market entry and exit and seeking to minimise sunk costs - those costs that are non-recoverable because of market entry activity (e.g. promotional information costs).

The key question remains as to how purely contestable market theory was applied through the 1980 Transport Act, how time and technology have overcome previously unremoved barriers, and if the market for express coach travel can truly find equilibrium and allow wholly uninhibited actions of both sellers and buyers – therefore how much requirement remains for some level of structure within the market.

1.3 Perfect Competition – conditions

The structure of a perfectly competitive market is arguably an idealised situation which is rarely observed in the real world. Its primary function within economic research is its use in benchmarking real-world markets against a situation in which, through the application of very stringent conditions, social welfare is maximised, and the market performs at its most efficient level - termed Pareto Efficiency.

Pareto Efficiency (Pareto Optimality) has three criteria which must be met; efficiency in production, efficiency in exchange, and efficient output mix (Hardwick 1994). It is;

“Where the outcome of a market is such that it is not possible for someone to be made better off without making someone else worse off, even after any possible compensation has been made. In this way, total welfare or satisfaction in the market is maximised” (Mallard and Glaister, 2008, p29).

An example in early UK deregulation may be the move by National Express to trunk links and the abandoning of some cross-country routes through resource reallocation to maximise profit – meaning a change in welfare for both sets of potential passengers.

Perfect competition theory's most practical application to real-world markets is the productive use of any information gleaned from a benchmarking exercise in stimulating change in the studied market through a range of identified measures, such as policy amendments, legal changes, or market accessibility modifications.

The result from these changes should be a market that benefits from improved performance and better social equity. This will occur if there is a change in market operating conditions designed to move the market closer to, or equal to a perfectly competitive structure. To create the architecture for movement towards this position, quite stringent conditions are set:

- There are many buyers and many sellers and no one buyer or seller can influence the level of production or price. This will be due to their size being small in terms of the market. Instead, price is determined by the large number of buyers acting independently and consuming all product;
- All products are completely identical, both physically and aesthetically, and are deemed 'homogenous'. Each unit of output is a perfect substitute for another regardless of the origin of the product;
- The market will operate at a completely elastic demand level; if one firm increases its price all buyers will immediately source their product elsewhere within the market – meaning the demand curve for a perfectly competitive market is horizontal (Pass, 1993) at the market price determined by buyers within the market if rules to protect the achievement of normal profits are not broken. In this structure, the market is completely elastic in terms of users switching between providers. An overall elasticity may nonetheless apply for the market as a whole - an example being for overall coach use;
- The market will not preclude entry or exit and there is a 'nil penalty' (no sunk costs or cost penalties) to a firm when entering or exiting the market; as such any firm, can enter or exit the market freely and simply;
- All buyers and sellers within the market have perfect knowledge. This extends to all parts of production and includes price and availability; and,
- All factors of production within the market are perfectly mobile; production can be switched immediately and without penalty (at 'zero transaction costs' for buyers and sellers) to a new location or production line.

In addition to the above conditions, the structure assumes all output of the homogenous product will be consumed and no wastage will occur during any production process or at the output level. This requirement makes the state very difficult to apply within the transport market as typically waste occurs through the inability to store product that is bound by 'timed' use through scheduled behaviour.

Equally, a perfect market will demonstrate non-increasing returns to scale - a situation in which the quantity of output generated is proportional to the factor inputs applied, such that if the latter were doubled then the output would also double. This differs from economies of 'increasing returns to scale' (described as markets where economies of scale exist) and defined as output increasing more than proportionately to the factor inputs employed to generate the output. In the transport market, it is more likely that economies of scale (or at least 'advantages' of scale) exist – for example using larger capacity coaches on routes may have a lower unit cost per seat-mile for largely similar operating resources as costs are spread wider. In a perfect state, non-increasing returns to scale will ensure a sufficiently high number of firms are retained within the market with each seeing no advantage by increasing production, seeking market domination, or by finding efficiency in production – maintaining multiple suppliers at a normal profit level.

If all conditions are met social welfare is maximised to uphold the Pareto Efficiency rule and the model represents a utopian state for any market seeking complete efficiency and welfare maximisation. The success of activities in the real world to positively impact, or shift, existing market structures are gauged by the resultant new market structure and operation to the proximity to this utopian state. Equally, the success of policies designed to allow free-market economies, where market forces rather than regulation can shape the productive outcome, can be assessed through comparison of these markets with the model. Traditionally this is used to understand if by allowing a free-market state; supply and demand is balanced correctly for the market (buyers and sellers) in question. To understand the success of this balance the level of social welfare demonstrated within the market can be the only substantive measure for a free-market economy. Douglas (1987) studied in detail the social welfare effects of express coach deregulation in the UK.

1.4 Perfect Competition – critique

As a structure, perfect competition simplifies the market. The most notable benefits are no monopoly power, no over pricing, no abnormal profits, and complete freedom for market entry and exit. To achieve this, the structure relies on there being no sunk costs for market entry or exit, and no advertising due to perfect market knowledge and identical (homogenous) products. Furthermore, no advantages can be gained by sellers refining the productive process as buyers are rational and perfectly mobile with no brand loyalty.

The agriculture sector is the closest approximation to a perfectly competitive market due to the simplicity of the products, their homogeneity and ability for substitution between sellers, and the effects of buyers, such as wholesalers, supermarkets and food manufacturers being well documented price makers. Within the transport market some of the closest approximations to a perfectly competitive market structure may be found within the shipping market where bulk services meet many of the criteria (Mallard and Glaister, 2008), and in the UK road haulage sector (Nash, 1982).

Perfect competition, as a model of total efficiency and social welfare maximisation may, however, have difficulties in its application to many real-world markets, including the passenger transport market. Although held up as the benchmark for efficiency and welfare maximisation there are arguments against the benefits that the stringent conditions of perfect competition are perceived to generate.

With freedom comes a stifling of other business practices. The structure allows no scope for entrepreneurial activity due to all the above factors which ensures that the buyer decides the price. This ensures normal profits are maintained in the long-run and any occurring short-run abnormal profits can be removed by 'hit and run' entry in the short term (Hibbs, 2003) – these profits either being rebuffed or forcing the market to re-adjust to meet the new entrant's conditions. This form of entry and competition can be counterproductive to the stability and sustainability of the market and the welfare of buyers within the market.

A further concern regards profit and market operation; should the motivation to either enter or be an ongoing actor within the market be questioned if only normal profits can be earned, and therefore, is a perfectly competitive market a relevant structure to consider? If this was the aim of Government legislation through deregulation of the lack of opportunity to make above normal profits if the market became perfectly competitive would have deterred new entry and choice within the market. As the market could not become perfect this issue failed to arise and abnormal profit levels were observed.

The structure supposes that having a large quantity of small firms acting in the market place, all producing identical goods, will not allow any firm to attempt to influence the market by being able to raise the price of the product being sold. In this sense, each firm is too small to have any influence on the direction of price or supply and buyers of the product are price makers.

Whilst for some markets where the resultant outputs being produced and consumed are very simplified this may be advantageous. However, for the road passenger transport market there is evidence to suggest that a smaller number of suppliers may be able to offer the same, and perhaps higher, level of efficiency and social welfare through the use of economic tools like economies of scale (achieving advantages through scale) and product differentiation – this is the case for services that operate as a network, but in other areas of the industry, such as the taxi market, there are many small firms supplying the market with a near homogenous product and a regulated tariff meaning identical pricing and therefore closer proximity to perfect conditions.

The structure also requires buyer power to dictate price. In markets where the product is identical and produced by many sellers, evidence of buyer power in determining unit prices for products is found, for example the milk market. However, in the road passenger transport market costs are often divided across fixed and variable headings. From these the cost of production and therefore the price required to either achieve normal or abnormal profits is determined. Within the coach market the use of fixed and variable costs to define the final production (selling) price makes these firms the price makers.

However, advances in information technology now create the potential for a power shift from seller to buyer in relation to 'price maker'. The growing use of yield management for fares and capacity, pioneered by low cost airlines in the United States of America (USA) and Europe as well as significant use of internet-based ticket sales across all long-distance public transport modes does have the potential to move power back towards the buyer, with fare levels tracked against demand to vary price according to available space on each departure.

To some extent, the buyer of transport services does play a role in the dynamic management of the price at which travel is sold benefiting from the rule that in economic terms the transport product cannot be stored - leading to the premise that any revenue is ultimately better than no revenue for each scheduled departure (Nash, 1982). However, yield management also results in price competition as fare prices fluctuate and vary between suppliers for competitive gain, further breaking the conditions of perfect competition market theory, though beneficially in social welfare terms.

Turning now to the social welfare angle, do non-increasing returns to scale, and the failure of one or more sellers to capture benefits in productive scale that may potentially be passed onto the seller, accrue to a maximisation of social welfare? The proposed juxtaposition between non-increasing returns to scale and social welfare may be one flaw with perfect competition. Logically, social welfare should be maximised when the market can produce at its most efficient level, it may follow that this can occur in a situation where increasing returns to scale are exhibited and more output can be achieved disproportionately to input levels by one or more sellers in a manner to better maximise wider social welfare.

If, however, as the theory requires outputs remain perfectly proportional to inputs then there is no incentive for any firm to expand beyond that which they are comfortable to operate, and no opportunity to exercise market power over rival firms either through more efficient operation, price control, or take-over and acquisition. This is a healthy market to work within only if there is no evidence to suggest that price reductions can be passed on to buyers when non-increasing returns to scale can occur. In transport they can, so perfect competition is not an ideal structure.

By contrast, the other side of this argument may be stimulation of monopoly or collusion through allowance of non-increasing returns to scale and the potential that not all efficiencies found translate into the maximisation of social welfare through costs or production output levels, for example the growth of abnormal or 'super' profits. The application of contestable market theory is more likely to provide the counter balance to resultant monopoly that may occur, with this strategy applied to discourage long-term super profits but allow non-increasing returns to scale to benefit buyer and seller alike.

1.5 Perfect Competition – summary

The structure of a perfectly competitive market is a reasonable benchmark to use when comparing the success of policies and mechanisms designed to change existing markets. It is a utopian state which is rarely reached, in the main due to the lack of homogeneity in most markets – with a free-market economy encouraging endeavours to improve efficiency, product form and function, and provide choice through price and product differentiation. However, the structure's ideals to seeing removal of monopoly, a balancing of supply and demand, and buyer led price making points to a structure that generally delivers well against social welfare, more-so than that of businesses in the market, but which is only applicable when production output can be guaranteed as homogenous.

The structure poses two ideals. Firstly, the most efficient and welfare maximising market will have many actors selling the homogenous product and that these 'sellers' must be small and numerous enough to prevent any individual movement towards market power occurring. Secondly, that all such sellers will be satisfied with a normal profit return and will not seek to maximise profits by price control, contradicting the normally assumed position of any firm in a free-market as a profit maximiser – a policy makers ideal scenario.

Do these ideals result in a difficulty for the perfectly competitive market to sustain the large number of sellers required for the structure conditions to be met, and furthermore, does this result in a level of apathy amongst suppliers who are unable to do any more than 'just cover' their costs? The structure makes broad and perhaps unrealistic assumptions about seller behaviour, as with buyers,

being assumed to be rational. However, many will look towards free-market principles (own-welfare and profit maximisation) to ensure individual gains that may arguably lead to buyer welfare as theorised by Adam Smith. If applied, the conditions of the market structure mean:

- Sellers are content that prices cannot be raised for long periods of time unless factors affecting all sellers and buyers are consistent such that all sellers raise their price and all buyers accept this;
- Abnormal profits cannot be sustained by a single seller without attracting new entrants or being forced to exit the market if remaining sellers keep their prices at the former level – sellers are content with normal profits;
- Products cannot be differentiated to provide a market lead or loyal customer base and in overall terms innovation cannot therefore be considered for individual seller gain – in any event products are infinitely consumed; and,
- Co-operative or cartel working are clinically eliminated, removing any concerns over sustaining large numbers of sellers - the market is therefore maintained by many small firms, content with normal profit levels and no market power.

Perfect competition appears as an almost virtuous state; a 'utopian' situation for consumers, producers, and policy makers. The structural outcomes achieved by rigid application of the conditions are not without their misgivings. The resultant structural characteristics describe a market in which there can be no leader, no affiliation of buyers (or segment of buyers) to any producer, and where there is no identifiable way for innovation to be exhibited through the functioning of the market as normal profit levels provide no incentive or reward for innovation and the conditions allow no benefit to be made to any one seller to innovate.

Despite these drawbacks, the market structure is still held up as one of the neoclassical economist's benchmark extremes (Button, 1993) by which all other market structures should be judged. Its simplistic conditions are argued to

maximise social welfare and remove waste from the market process. However, if the pre-1930 Act market was as close to perfect as it got for coach services why did waste occur or become cited as the need for regulation? Many economists observe that markets tend to perform differently and are affected by factors outside of their control which damage the ability of the market to perform to its most efficient, and indeed even close to that of Pareto Efficiency as required by the perfectly competitive market structure.

Therefore, the remit of appropriate and effective policies is to move a market towards the most desirable operational outcome, which may not be static, and which while tending towards perfection may only achieve some of the ideals the market structure promotes.

1.6 Contestable Market Theory

Contestable Market Theory (CMT) is an economic mechanism that can be applied to a market deemed to be in failure. It is driven by the notion that the threat of new market entry (competition) will stop the occurrence of abnormal profits, welfare degradation, and anti-competitive behaviour.

Market failure may be in evidence through incumbent firms charging too higher prices and restricting supply (Monopoly), or, alternatively through incumbent firms losing touch with buyer market requirements and a resultant declining market, due in part to the rules governing the market.

Market power or overly restrictive controls on supply are the main causes of market failure. Too much market power existed in many formerly regulated transport markets (Mallard and Glaister, 2008) stimulating several deregulation and liberalisation processes aimed at creating much higher levels of competition and ensuring the benefits that many economists argue competition can bring. CMT is a mechanism that can be used to reinvigorate and move a market back to equilibrium, where welfare and efficiency are maximised, by creating a movement between static structures. The process is referred to more commonly as 'making a market contestable' and is designed to allow competition, or at least the very threat of it through new market entry, to occur.

In this way, the theory relates to a market's general openness (Hibbs, 2003) and outlines the conditions needed to stimulate movement between the static market structures, towards the idealised perfectly competitive market state. Developed initially in the 1970's by the Chicago School of Economics (Stigler) as a development of the theory of industrial organisation, CMT was popularised by William Baumol in 1982. The theory seeks to remove the need for specific policies to dictate the progress to each 'static' market structure stage, and instead allows a fluidity to exist whereby the market settles through the free actions of buyers and sellers, as with Smith's 'invisible hand' theory, brought about by a relaxation of operating conditions. This allows the market to re-settle at a new efficiency and welfare maximised position which due to the product's nature may not, be perfectly competitive.

Its principles are cited as the preferred outcome for the liberalisation of scheduled long-distance coach services in the UK through the 1980 Transport Act (Robbins and White, 1986) though at the time the Act was formulated Baumol had not published his defining work of 1982 regarding the theory, and principles were drawn from Stigler.

The mechanism is applied to a market to allow the potential for change away from its current static state observed. Its conditions have advantages over more traditional static structures, such as perfect competition, in so far as it allows the seller more brevity in their approach to the market and activity within it. CMT allows non-homogenous goods and services and some abnormal profit levels, as well as firm size and quantity within the market to vary, suiting the market and buyer conditions. Furthermore, CMT encourages multi-product firms and allows for benefits brought by 'network effects' and advantages of scale, both of which can be argued to increase social welfare, price, and efficiency over the pure form of perfect competition.

This modern approach challenges more established thinking. It is more easily applied to real world markets and offers suitable parallels to conditions enjoyed by theoretical perfectly competitive markets. Its advantage is that it enables some of the potential benefits of monopolistic market structures to function in an environment where competition is encouraged but not mandated.

Based on the premise that the 'potential' for market entry regulates actors already operating in the market, it is important to establish if the profit levels of these actors are normal or abnormal before making the market contestable through changes to its governing rules. The level of profit already being made will affect the level of pressure on potential entry (Ferguson and Ferguson, 1994) and by default the success of any policy changes made to allow contestability and effect a change in the static market structure already in existence.

If amending the governing rules to ensure the market is made contestable, the activities of firms will be regulated purely by the 'threat of entry' of new firms and therefore act in a way to discourage entry by satisfying market demands in the most efficient ways and at profit levels which are not seen to be 'super' or 'abnormal' by firms not yet in the market. As soon as inefficiency or abnormal profits are observed new market entry is attracted and facilitated by the contestable environment created.

The conditions for a contestable market (Baumol et al, 1982) state that it must be accessible to potential entrants, and meet the following conditions:

- There must be no entry barriers, and potential market entrants must be able to serve the same market and use the same productive techniques as those already employed by incumbent firms to provide this service;
- Any potential entrant must be able to enter the market accepting that the increase in supply will have the effect of lowering the price for the good or service, but that the price they will charge will allow all demand to be satisfied and provide the requisite return to make entry into the market viable. It is accepted that in most cases the new entrant will aim to price their good or service at a figure which undercuts the incumbent(s) current price structure (but not always, as seen by more sustainable 'up-market' entries to the UK market at deregulation e.g. Cotters);
- It is also noted that on exiting a market, any firm will be able to recoup all capital costs, less depreciation (Pass, 1993). In this way, the market is both easy to enter and exit at any point and this condition has strong

parallels with perfectly competitive market structures and suited the private hire pool of operators being targeted by the Act. There must be minimal sunk costs for any market entrant – these being those costs which are non-recoverable following movement out of a market and which include any perishable items such as wages, advertising, utilities, and goodwill (Pass, 1993); and,

- It must be established if the market demonstrates normal or abnormal profit levels prior to the application of CMT; only in the latter scenario is the threat of entry likely to be stronger and act as a market ‘self-regulator’ though only where a market is not in a controlled monopoly as was the case in the 1970s UK market.

The potential for successful market entry and exit is essential for CMT to fully function. This entry and exit must be free from (or only suffer minimal) barriers to the movement of firms into and out of the market. Where present, these barriers may see larger costs incurred by the entrant than costs of operation for those currently in the market (Stigler, 1968), and may be symptomatic of protectionism of incumbents within the market (von Weizsacker, 1980).

For example, the 1930 Act created barriers to entry including quantity of supply and protection for the rail market, and the 1980 Act, although removing most barriers, saw unavoidable sunk costs remain and protectionism achieved for incumbents through failures to ensure free access to main coach terminals across the UK. Therefore, barriers must be both without financial penalty over that which an incumbent market actor already faces and with minimal protection of incumbent actors through loyalty (social protection) and brand allegiance.

The process of CMT is implemented to stimulate at the very least renewed interest in the market. With this process in mind it can be observed that the theory is not naturally occurring, and instead is largely applied as a political tool (encapsulating changes to regulations and legislation) to manipulate existing markets into more acceptable structures. This is exemplified by its numerous applications by governments to move regulated markets to a largely self-

supporting liberalised state with minimal effort, but with maximised efficiency and social welfare benefits.

CMT is a useful economic tool, particularly for Governments who have the power to change market entry conditions to aid the flow (potential) into the market. This is not regulated flow as seen through the 1930 Traffic Act, and therefore a controlled monopoly (Hibbs, 2003), but an ability for free flow which acts to regulate the market – keeping prices down. However, CMT is a tool to stimulate market structure change and to be successful two critical conditions (low sunk costs allowing low cost exit, and, widely available technical knowledge and production techniques) must be met (Hardwick, 1994).

Regarding the transport market Mallard and Glaister (2008) note further observations and conditions that a market operating successfully in a contestable state should exhibit with these having relevance to the success of liberalised transport markets. Figure 2 summarises these conditions and applies them in the context of the UK express coach market prior to, and post, deregulation.

Figure 2: Contestable Market Theory conditions applied to deregulation

Condition	Pre-1980 Act	Post 1980 Act
The number of actual actors in the market is unimportant. The theory requires only the threat of entry by other firms as its criterion for ensuring efficiencies (this is the main difference between contestability and perfect competition and mitigates the unrealistic notion of many firms being required to operate in the market to ensure efficiency).	Many firms existed in the private and contract hire sector but quantity restrictions stopped entry	Many firms existed in the private and contract hire market and had resources to deploy upon deregulation

Condition	Pre-1980 Act	Post 1980 Act
Existing firms within the market must not have access to large levels of finance which can be used to deter a competitive incursion into the market by allowing the firm to instantly reduce its prices, in line or lower, than the new market entrant. Essentially cross-subsidisation from another part of the business (if multi-product) or from reserves held at a higher level (e.g. state funding) should not be allowed.	Most services provided by the state 'National' network but notable independents protected by route licence monopolies under 1930 Act regulations	Protection from fare change freedoms removed but state still funded dominant firm so potential for financial support through capital at low interest levels – not subsidy as such
Low levels of brand loyalty must be exhibited such that conditions of buyer movement typified by the perfectly competitive structure (i.e. to instantly move to an alternative and lower price product when one becomes available) are observed. This will encourage new market entry and should ensure that incumbent firms keep prices at levels where abnormal profits are not made.	Pre-1970s no UK brand - in 1972 the 'National' brand launched and became iconic as 'the' coach network – consuming other household names	The National network stifled potential competition which was also not substantive enough to provide full substitution

The applicability of CMT at the point of express coach deregulation in the UK was its function to encourage the act of entry to a market by a multi-product firm where a market is seen to be operating inefficiently. The aim of such entry is to cause a move toward Pareto Efficiency with the multi-product firm able to use synergies within its existing production process and other market exposures to benefit the new market being entered through production efficiencies. Examples abound of entry to the express coach market by existing private hire operators, with successful entrants combining their knowledge of local markets, new on-board facilities, and higher customer service standards to the scheduled coach market (such as Trathens).

Creating a highly contestable market should also ensure that it tends towards a high level of allocative efficiency, with incumbent firms operating at levels where few abnormal profits are being made due to the threat of new entry – this was important to control fares and stop wasteful competition at the point of

deregulation under the 1980 Act. As noted for a perfectly competitive market, there also exists the opportunity for 'hit and run' competition (Hibbs, 2003) where a market is not operating at optimum efficiency. CMT makes this form of rapid market entry and exit easier to achieve; it may act to re-balance the market through long term sustainability and innovation or short-term market shock to reign in a monopolist.

While contestability has wide ranging benefits as an economic tool bringing about positive change to a market structure, as with perfect competition, there are some potential problems with its application:

- While it is logical to expect prices to rise as the number of sellers become concentrated, this will remain the case, regardless of contestability, so long as there remains a continued demand for the product and no alternative or substitutes at similar or lower price. In other words, even with contestability in place, there is no inclination for new market entrants to force a lowering of price through innovation, efficiencies, or lower cost base unless there is absolute evidence of abnormal profits;
- Furthermore, a market may contract for many reasons regardless of the freedoms of entry or exit (contestability). Mergers and acquisitions may lower incumbent firm numbers with resultant organisations able to control more of the market and exercise higher levels of market power and advantages in scale (maybe even truly exploiting economies of scale in the right conditions). This is allowed under CMT but may make it unattractive for new firms to enter, even though entry (and exit) conditions have been eased;
- If prices in a market continue to rise with concentration can it be described as contestable if this situation fails to stimulate new entry to stabilise the price? (Weiss, 1989). Surely, if prices rise unchallenged the theory has failed as the central concept is that the mere threat of entry will be enough to sustain prices such that profits are at or close to normal levels (however, it should be noted that prices may rise even when abnormal profits are not being made due to external factors - e.g. global fuel price increases); and,

- Contestability has synergies with Demsetz's work (1973). This demonstrated that high profits may be less to do with market power and are more a sign of efficiency of the incumbent firm(s) in the market – in theory a scenario which should be encouraged if such efficiencies have some end-price benefit to buyers, even if all this benefit is not immediately transferred (Ferguson and Ferguson, 1994). For example, this may be evident by some profit made at this level being withheld to allow the seller to retain market position by investing in research and development (resulting in innovation). An example in the coach market is Stagecoach; with high profits, dominance in many local markets, and a 40% share of the UK express coach market, they continue to invest heavily to grow market share and profit through innovative service enhancements, often at a faster pace than competitors such as National Express who have historically been slow to respond to competition by innovation.

If contestability allows for a situation where the market can be concentrated, but also where market power is not used to restrict production output then high profits may be allowable. While artificially high prices may be created to maximise profits, efficiency will deter market entry but not preclude it. Contestability will ensure that market firms are sufficiently pressured to make realistic profits but not so high or so inefficiently as to attract new market entry or exploit buyers.

Regarding the role of innovation to stimulate market entry, as allowed through CMT, it has been stated that;

“In fully contestable markets, imitation of a new product or process would be instantaneous and widespread. Innovation would therefore be irrational since the extra costs incurred in research and development would bring no prospect of enhanced profits.” (Ferguson and Ferguson, 1994, p112).

However, one of the freedoms of the mechanism, unlike perfect competition, is that innovation and entrepreneurship can facilitate successful market entry (e.g. Megabus). What has been seen in markets where contestability has allowed liberalisation is a combination of some like-for-like product entry and some innovative entry – in each case successful entrants have secured a niche market role for their product and it has been exogenous trends that have shaped the

long-term success of each product such as disposable income, competition from other modes, and information technology advances. This may, however, explain National Express' lethargy in innovation through the 1980s and 90s as there was no real incentive to do so.

1.7 Contestable Market Theory – summary

The theory may be argued to create a hybrid of benefits which is more palatable and achievable, particularly by policy makers than more traditional market structures. Application allows a fluidity of market structure and operational approach to allow the principles of free-market economics to apply more readily to each market.

CMT appears to allow a market to sit halfway between imperfect and perfect competition. It requires that entry barriers are sufficiently low to allow any firm to enter and exit the market at any point in time, and without losing any more than the low level sunk costs assumed. It also supposes that the productive techniques and technologies are immediately available to any new market entrant and it is probable that the theory better suits industries where entry is typified by investment in capital equipment and physical assets that can be easily disposed of either through the course of a successful business, as new equipment replaces older exhausted machinery, or if market entry is unsuccessful.

Perhaps, then, these are the weaknesses. When applied to transport, market entry often needs considerable planning and may create considerable non-returnable outlay in terms of product awareness, research and development, and goodwill, not to mention perishable items such as wages, fuel, utilities, insurances, and leases. CMT appears to be a policy maker's tool and does not occur naturally, as might a monopoly or more rarely perfect competition.

However, the observable benefits of CMT can be summarised as:

- the creation of conditions to allow competition to occur and move an underperforming (failing) market from one static model towards a preferable structure;

- the allowance of incumbent monopolies to remain following policy and market entry/exit changes, meaning that pre-existing advantages of scale can remain, and new ones potentially created by entrepreneurial activity;
- network operations remaining or developing and important within the transport market as these can be of significant social welfare benefit;
- the threat of competition through market entry ensuring prices are kept to levels where abnormal profits are not common and, where they occur, are swiftly eliminated;
- the allowance of innovation and product differentiation with incentives to create efficiencies, better products, choice, and long-run investment; and,
- entrepreneurship and the opportunities to exploit gaps in the market. Where developed this will provide additional choice and quality of benefit to the market and may create new sub-markets for niche products - e.g. the premium level services (market segmentation) like those operated at deregulation by Trathens and Cotters, and more recent overnight sleeper services with unique vehicles built to meet this demand; e.g. Stagecoach Megabus Gold Anglo-Scottish overnight services operated until 2017).

Chapter 2 – Market theories enabling non-perfect competition

2.1 Overview

In establishing a mechanism to achieve a market structure there is an important decision to be made in deciding the acceptable level of social welfare loss or gain compared to the ability of the market to retain some incentive to drive the processes of market supply, technical innovation, and product differentiation.

Of these elements, it may be that product differentiation, although causing some social welfare loss through reductions in productive and allocative efficiency, may ultimately be a virtuous circle for the consumer – and it is in this field that most sustained success in liberalised transport markets is found, for example Trathens and Cotters in the 1980s with on-board enhancements and Megabus in the 2000s with no-frill travel specification. Furthermore, where barriers to market entry by new firms are managed and reduced through policy tools, new ‘potential’ access to act as a balance against complete market power by incumbent firms ensuring social welfare in price and choice terms is maintained; this process is encapsulated by the popular CMT model which is a tool to help markets move between the neoclassical states now described.

The neo-classical views of market structure categorise in a hard way each market based on the characteristics it portrays. These structures are said to be static and movement between them is often the result of a seismic change in market conditions – this may be a result of policy or regulatory change (such as an act to deregulate the market), or a direct result of external (exogenous) factors which have a significant impact on market operation – for example changes in production processes, technology, or supporting infrastructure (such as the development of motorways and the expansion of e-commerce).

The following chapter outlines four classic market structure models that all have a place in the long-term development of the UK express coach market. Changes to regulation and policy together with exogenous factors have allowed the market to move between states in both directions and the inclusion of Monopsony, not typically associated with the passenger transport market, is due to the unique

contracting model developed by National Express following the 1985 Transport Act and privatisation of the firm in 1986. This saw the use of a business model creating a competitive market to supply the firm and discourage private entry into the market, making it more attractive for a smaller operator to act as a contractor to National Express without revenue risk, rather than competing with it directly.

The market, prior to deregulation through to the present day has moved from a state of 'controlled' monopoly (Hibbs, 2003), through monopolistic competition, to a general state of oligopoly aided by the monopsony situation regarding the market to supply National Express. The removal of traditional entry barriers through application of e-commerce to allow a significant and sustained market entry that used 'loss leading' techniques and cross-subsidy funding through depth of financial resources to remain in the market today –Stagecoach Megabus - is also observed.

While the primary neoclassical theories are outlined here with evidence of their existence highlighted through examples drawn from the UK market experience, further distillation of market structure is noted in Chapters 3 and 4 where the market is found to also be moving between the states of a dominant firm oligopoly and a non-coercive monopoly.

2.2 Monopoly

A market in monopoly condition is one in which a sole firm supplies the 'entire' output for the market concerned (Bain, 1959). One seller will be found to be acting in the market place and this seller will interact with a potentially large quantity of buyers, the precise number and nature of which being dependent on the market for the type of goods or services being sold. All buyers will continue to act independently of each other in this market structure as the neoclassical theory states that buyer collusion is not allowed, identical to that of perfect competition.

This was not the case for the UK express coach market ahead of deregulation. Although the state owned National Express was the dominant market actor, other firms also provided express services. Instead, the market was described as a 'controlled monopoly' (Hibbs, 2003), where a monopoly was placed on the

quantity supplied to the market – the controller in this case being government legislation and the restriction of Road Service Licences (RSL) for routes across the UK.

For the more typical neoclassical monopoly structure, the criteria of being a sole supplier to the market is not simply enough on its own to constitute a dynamic monopolistic market structure with a profitable and growing long-run monopoly. Market power, the correlation between market concentration and profit, (Ferguson and Ferguson, 1994) is also required so the monopolist has complete control of the supply of goods and the prices at which they are sold; the monopolist will vary this ratio of output and price to maximise profits. From the buyer's perspective, they must buy the goods or services produced at that level set by the monopolist firm who becomes the price maker and who maximises profits with the buyer being the price taker.

Therefore, monopoly is at the opposite end of the buyer to seller spectrum to perfect competition in so far as excess profits may be made without loss of buyers and sometimes in return for welfare gain. A monopolist can exert a level of market power over price and supply – where its unique position allows it to make operational efficiencies it will produce additional output at marginal cost (MC) until it is equal to marginal revenue (MR). In general, a monopolist would not expand output beyond the optimal point (MR equal to MC) (Hardwick, 1994) and, due to this intersection lying to the left of the point where average revenue (AR) is equal to average cost (AC), it is lower than that under perfect competition. Where nothing is to be gained at marginal cost a monopolist could create further profits by restricting output, this being dependent on relative shapes of the MC and MR curves. This was seen in the late 1980s to early 1990s. National Express had. Consistently increased fares within a shrinking passenger journey market with revenue loss off-set by reductions in some services. The passenger market exhibited high short-run price elasticity and this sensitivity to price change should have stimulated new entry, even in a hit and run format. However, none occurred due to the high sunk costs of entry, continued price competition from rail, and the lower risk (monopsony) business model used by National Express and independent firms that may otherwise enter the market alone. Technology was not advanced enough at this stage to allow low-cost entry, unlike today.

However, a monopoly market may also become a deadweight loss if prices rise with falling output, creating a degradation of social welfare (Hardwick, 1994). This is arguably the result of fare increases during this period with revenue losses offset by a shrinking network.

As the structure allows firms to be dynamic they may manipulate this situation; the benefits of a monopoly therefore being innovation and product differentiation in addition to; first, second, and third level price discrimination, and market stability (potentially important in transport modes). However, the two most important benefits of monopoly are economies of single ownership, and technical progress (Hardwick, 1994). As technology has developed dominant (or monopoly) firms have been able to apply innovation in different ways. With many economic texts regarding monopoly pricing (such as Hardwick, 1994) being written before the current development of yield management pricing – now a common place innovation in the market from 2003 it is possible to speculate on its impact to dominant (or monopoly) market operation, as seen in Germany with FlixBus.

Using yield management to change in real-time fare and capacity levels, a monopolist has the potential to extract greater profit by marking up fares at times of high demand (peak seasons or special events) immediately, and in a more selective manner than was possible under conventional pricing systems, such as the 1980s when information was only available in pre-printed format. E-commerce and portable technology has created a seismic change in the way services are planned, marketed, managed and delivered, allowing market entry in new ways with companies no longer needing to be transport providers in the traditional sense. Instead virtual services can be marketed, and third-party transport organised – better matching demand, supply and price. This has allowed new-era giants such as FlixBus to run at 60% load factors profitably.

In industries where constant yields cannot be guaranteed, such as transport, an element of overpricing of goods and services is acceptable and is often required to provide the service. This is due to escapable costs, as noted by Hibbs (2003), or costs more commonly termed as variable. Such costs are those that are incurred directly because of output created, but which would not exist if output

was stopped (fixed costs are the opposite and those which exist regardless of any output being produced). One area of weakness with liberalising markets is the inability for small and medium sized firms to enter new markets and finance additional variable costs to build market share in the short-run; aggressive competition from established incumbents often focuses on price to eliminate such entry.

In some cases, regulatory control may be imposed on an industry that is a clear monopoly and this may not allow full dynamism. Regulation is likely to take the form of price control and, as noted by Hibbs (2003), some regulators may require a process known as internal cross-subsidy to take place so that firms are forced to support otherwise loss-making aspects of the market with those excessive revenues gained from other profit-making business areas to keep social welfare equitable.

For monopoly to be maintained a strong barrier to entry, which is very difficult to overcome by any new market entrant, must be maintained (Mallard and Glaister, 2008). Often, this situation is known as 'blockaded entry' (Pass, 1993) and may include more than one 'barrier' - these barriers can be either individually or a mix of; financial, bureaucratic, legal, anti-competitive (possibly regulatory), or loyalty based nature. One way to blockade entry is to try to achieve scale, to create advantages and even economies of scale. These are a benefit of the dynamic form of this structure and allows firms to innovate to maintain market position and develop production efficiencies to help economies of scale to materialise. This barrier is often one of the most noticeable as it relates to the sheer size of any incumbent firm or their production process, be it the production of goods or delivery of services.

As an end-game concept, economies of scale occur when a firm uses larger capital resources or production techniques to produce an even greater (non-linear) increase in output when compared to input effort (Pass, 1993). This increase may reduce the overall average price of the good or service produced, and it follows that the firm may then choose to pass on some or all the cost efficiency to its consumers, in turn enabling it to maintain and possibly grow market share to defend its monopolist position from new entrants.

For example, steadily increasing the frequency of a scheduled road transport service will typically see more than proportional growth in the use of that service due to the increased convenience that also occurs as frequency allows journeys to become unplanned. Prior to UK deregulation, National Express exploited the potential of economies of scale through the CoachMAP exercise, a process first used by the NBC for its local bus network. National Express re-drew its network, making increased use of the newly developed motorway network and moving resources onto trunk corridors to increase frequencies – creating a double-win through the shorter journey times. This in-directly enabled National Express to re-position itself to compete more effectively at deregulation with new entry and with the growing InterCity rail network. In this way economies of scale were generated, using resources to increase more than linearly passenger use.

Whilst economies of scale (or at least the advantages of scale) enable long-run costs to decrease at the same time as output increases, of equal importance for service industries such as scheduled transport, is the concept of economies of scope. This is the process of average cost declining as network size increases (Mallard and Glaister, 2008). This concept is aided by the development of hub and spoke networks whereby larger firms involved in the movement of goods or people use a tactic of breaking up loads at significant locations on the transport network and at these locations re-distributing the loads to new routes. This has the effect of better resource allocation as the size of the units of carriage can be varied across the route dependent on the likely loads to be expected, and as each unit of carriage is running across a shorter end to end distance it can be utilised across this shorter route more frequently, thus providing a higher level of choice for consumers with increased efficiencies and less wastage – outcomes not dissimilar to perfect competition.

Regarding allocative efficiencies, one defect with monopolies argued for inefficiencies based on an inverse relationship between market power and welfare is that the more power (or monopoly) the worse the effect on social welfare. A common error is to only view allocative efficiencies and their benefits to welfare and then as such underestimate the welfare losses caused by increased market power of the monopolist over price and quality to the market (Motta, 2007).

2.3 Oligopoly

A market structured as an oligopoly sees several large firms dominate an entire industry, with domination being the measure in percentage terms of the industry output accounted for by the top firms. This may now be the situation with the scheduled express coach industry in the UK. Hardwick summarises that;

“Many markets that at first sight appear to be monopolistically competitive are in reality dominated by a few major producers who each manufacture a large number of different brands. These markets can best be described as oligopolies.” (Hardwick, 1994, p177).

There is no completely holistic theory for oligopoly due to a process known as oligopolistic interdependence. This is noted as being;

“The recognition by an oligopolist that if it changes its price or non-price strategies, its rivals will react.” (Hardwick, 1994, p177).

Therefore, as each firm’s reaction to another’s price or production change is not uniform and may vary from firm to firm within an industry, or between industries a range of models to define oligopolistic behaviour’ have been developed. The most pertinent of these are outlined below:

- Kinked Demand Curve Model and Cartels – these are described as market sharing models and are either overt or covert in nature. The kinked demand curve model explains price stability within oligopolies but is limited in its use to understand what factors exist to enable profits to be maximised. Used to examine price stability and the effects of price changes the model is also linked to non-price competition which may proliferate where an oligopoly operates with a high degree of excess capacity - as such a price war would force prices down to a point that would cause losses and exit from the market for firms experiencing these losses (Hardwick, 1994). A situation seen in the early days of UK deregulation between British Coachways and National Express. Cartels may therefore form to stop this happening and to set viable prices; and,

- Dominant Firm Model – defined as;

“A firm that accounts for a significant proportion of the supply of a particular good or service. Such a firm exercises a considerable degree of power in determining the supply terms of the product. Under UK Competition Policy a dominant firm is defined as a firm which supplies one-quarter or more of a specified good or service” (Pass, 1993, p143).

The model itself is dependent on the dominant firm setting the price and having a lower marginal cost per unit of production than smaller firms within the oligopoly who accept the price dictated by the dominant firm and produce up to a point where this price meets their own marginal cost curve. This model is not efficient as the dominant firm can produce at a lower marginal cost and therefore an efficient market place would see all other production shift to the dominant firm as the same overall quantity could be produced for less. However, should more producers enter the market in the longer run facilitated by contestability, then this difference would be significantly lowered and the dominant firm’s position weakened (Hardwick, 1994). In terms of the UK coach market after deregulation it is arguable that this state existed in the settled phase after short-term competition with many firms running alongside National Express or finding a niche within the market that allowed both to co-exist, each in their own cost ‘comfort zone’ but not at the most efficient consumer outcome.

The main operational difference between an oligopoly and other structures is the interdependence between firms. An oligopoly recognises that firms will react to each other when supplying the market. They will vary their levels of output and price in accordance with what competitors are doing and will look to develop products and processes that are differentiated from competitors to underpin or grow market share. This development process is a direct reaction to what competitors may be intending, or indeed have done, already. The notice periods required for new services, or amendments to existing services in most liberalised markets (for example the UK and Germany) aid this process and help perpetuate the oligopoly structure.

2.4 Monopsony

Monopsony is mostly applied within labour markets. The condition is characterised as one buyer acting with many sellers (Hardwick, 1994) and is in complete contrast to the more commonly observed state of market monopoly.

In its operational format, many sellers are seen to be suppliers of products. These products all act as significantly close substitutes for each other and as such can coexist in the same market place, affording the sole buyer the opportunity to source these products at very competitive rates and on similarly competitive terms (Pass, 1993).

Whilst the structure of monopsony is widely applied to labour markets it may also apply in service and product markets. For example, Wal-Mart, a super-sized retailer in North America, is commonly defined by economists and journalists as a monopsony. Wal-Mart's sheer size and market dominance means that in many product areas it is the only buyer of outputs by selling firms. This has advantages for Wal-Mart and other similarly described monopsonies as the competition between these 'selling firms' to supply the single product buyer in theory drives down the final output price, the single buyer benefiting from lower purchase prices and potentially bulk purchasing deals, particularly as producers will often strive for longer-term supply agreements for their produce often at fixed prices. The single buyer therefore finds themselves in an enviable position, and indeed may set up the market to act in this way if it suits their business model. However, they may alternatively prefer shorter-term deals or one-off purchases so that the price is constantly checked and is at its lowest point possible in each market situation, this may be more applicable to perishable and seasonal products such as fruit and vegetables.

To set a market place up as a monopsonistic operation a buyer must either be significantly larger than anyone else in the field to become a monopsonist, or the product being purchased (although produced by more than one seller), must be so bespoke as to limit the likely buyer numbers to just one. However, firms can also be observed to be a monopsony buyer but a monopoly seller. This is effectively what National Express has created through its business model of

service procurement and allocation where, until the advent of long-term competition by Stagecoach Megabus it was close to a monopsony buyer. Now, with the growth of the Megabus network and National Express finds that it must compete for custom with Stagecoach to secure third party services, moving power partially back into the hands of the seller and breaking the once enjoyed monopoly in contracting conditions.

However, what happens when firms supplying a monopsonist diversify to become a 'seller' due to market freedoms (newly allowed or already in place) - furthermore, what might prevent them from doing this, and entering the market alone? If the market were barrier free to entry and exit (contestable) the argument suggests suppliers choose not to enter the market alone owing to the greater protection, stability, and complementary services that the monopsonist provides.

For example, the monopsonist will take on the role of marketing and planning, often operating under one single brand and this will remove these variable costs from the independent firm who may have local spin off benefits to other business areas through association with the larger brand.

Regarding implications for social welfare in relation to monopsonistic market structure Hardwick notes that;

"It can be concluded that the monopsonistic buyer of labour pays a wage less than the value of the marginal product of labour. The buyer thus employs a smaller work-force than that required for Pareto Efficiency"
(Hardwick, 1994, p299)

Pareto Efficiency is a situation where it is not possible to make someone better off without making someone else worse off; in the UK the number of third-party contractors to National Express has decreased over time exemplifying this effect. In theory the competition for National Express diagrams will make cost per mile contracts low in comparison to the returns that independents may aim for if working as a direct market operator. However, reducing the number of operators to below Pareto Efficiency ensures that those in the market will work harder to achieve additional work, keeping prices keen as a result.

2.5 Monopolistic Competition (Imperfect Competition)

Monopolistic competition, or imperfect competition, was developed in a period where economists were dissatisfied with the extreme structures promoted by the models of perfect competition and monopoly. Forming part of the neoclassical thinking on market structure process it is a middle ground between monopoly and perfect competition (Mallard and Glaister, 2008). The structure is defined as;

“One in which there are many firms that are all supplying similar, but not identical, products to the market. There are barriers to entry but they are not prohibitive and so there is a constant fluidity to the market as firms do enter and exit” (Mallard and Glaister, 2008, p125).

In this structure, each individual firm is designed to act independently from the next, thereby one firm will not take account of any other firm when adjusting its output or price - this is 'largely' the case (Maunder, 1995) and alludes to some ambiguity over the practicality of this structure which assumes firms act independently. However, in many industries firms will closely observe the activities of competitors and within the confines of competition law act to protect and often expand their share of the market – this is true of the express coach market where competing firms matched each other on price at deregulation (less so on frequency) and continue to do so in today's market.

Monopolistic competition is defined as having relevance to the real-world operation of markets, where product differentiation is allowed, and where there is a notion that total monopoly has disadvantages. The ability to have differentiated products allows non-price competition to exist, in turn providing the potential for prices to remain higher than those found in a perfectly competitive structure over the long-run. This was exemplified by the product and price differentiation and the attraction of different passenger groups through competition between Trathens and National Express in the 1980s and more recently between Stagecoach Megabus and National Express. However, it is argued that the optimal allocation of resources that is a long-run result of perfect competition is not replicated in the monopolistic competition model (Hardwick, 1994) because of the potential to continue to innovate and differentiate within the structure – for example the more recent trend for larger capacity coaches operating on long-distance express services in the UK.

This structure, with above-normal profits often observed to occur over a long period of time (for example that exhibited by National Express in the early 1990s) does provide the opportunity for new market entrants, and coupled with the availability of product differentiation, makes this market structure desirable to selling firms. If demand for the overall product remains static then arguably any new levels of market entry will force profits to a normal level, however, if the market grows, and indeed continues to grow even with the advent of new market entry, then the 'constant fluidity' of the market (Mallard and Glaister, 2008) is in evidence and higher levels of profit can be retained by incumbent and new market actors.

Under monopolistic competition there is a high level of 'brand competition' often stimulated by product differentiation (Mallard and Glaister, 2008). This is designed to extend as far as possible the short-run abnormal profit levels created through the model's allowance of product differentiation. If brand competition continues into a long-run scenario, and the market continues to grow, it is likely that the consumer will start to pay a higher price to that which may be paid in a perfectly competitive market; this may lead to evidence of the 'excess capacity theorem' (Hardwick, 1994).

Excess capacity will occur when one or more firms are operating at levels where the cost to the buyer is not at the lowest point on the long-run average cost curve, yet these firms remain unchallenged by any new or existing market supplier on a cost or capacity basis. Essentially it allows for the market to continue in a state where excess profits can be made for sustained periods of time by one or more firms until such a time that new entry creates a significant enough shift in demand by consumers as to have an overall effect in lowering the price paid for goods or services by the consumers in the market place. In the case of National Express through the early 1990s excess capacity existed as higher fares saw a reduction in passengers with little erosion of profits – however, increased competition from rail and a change in management team eventually saw a reduction in fares and increases in passengers. This showed market forces to be working less well in the deregulated environment - change only occurring after some years of high prices and with considerable loss of demand, consumer surplus, and with no new road based market entry occurring to check this at any stage. This lack of entry

was likely aided by the business model created by National Express creating enough diversion to deter direct entry even with rising fares.

It is arguable, therefore, that the more settled period in the post deregulation express coach service market met the criteria for the 'excess capacity theorem'. However, in 2003 the Stagecoach Megabus operation created a significant enough change in the operational landscape to further challenge this position and force incumbent market suppliers to react and reduce the average fare levels for inter-city coach travel; the significant trigger here to changing the market landscape was the use of e-commerce (technology advances) as a sales and marketing media. Through the harnessing of this channel dynamic management of fares and capacity using 'yield management' was observed and has fundamentally changed the market forever.

While product differentiation is one of the keys to monopolistic competition it creates the linked 'existence of advertising' (Maunder, 1995). Increased advertising may be a double-edged sword; on one hand, increasing information and therefore knowledge to guide the market place towards perfection, it also highlights the product differentials and is used to exploit the unique elements of one producer over another, heightening the imperfections of the market from a product homogeneity view point (Stanlake, 1971). With each firm having total control over its product it may use tools to differentiate it physically and aesthetically from other firms in the market.

Monopolistic competition may be a cyclical process creating at times a producer surplus before market forces cause it to re-stabilise. Nash (1982) points to the issue of 'wastefulness' - making the point that competition in the passenger transport field is wasteful owing to the lack of storage of the product created; this being immediately perishable on production in the scheduled market for transport. Increased competition, Nash argues, has the effect of increasing market supply and the short-run effect of this will be a lowering, perhaps drastically, of the average load per unit of transport provided by the market suppliers and increased waste.

For example, if a scheduled inter-city coach service operated at a high load factor, for example 80%, and was the sole supplier to the market the implications of competition may not be an immediate loss of traffic, nor might it be an initial growing of the market – instead a competitor competing with exactly the same capacity per hour would double the transport opportunity (seats available) for the existing market and would effectively halve the average load if this additional capacity was timed to match incumbent supply - at least for the very short-run period. This would raise the unit costs for the incumbent firm who may have to further worsen the situation by lowering their fares or providing more service differentials to retain market share and stem the impact of competition. However, if the new competition operates between the services provided by the incumbent then the market will see a net gain as more accessible journeys will be provided through choice – the corridor effectively seeing a doubling of frequency and experience shows that this will increase demand, significantly with the incumbent noticing little negative effect as a result.

However, ultimately;

“Even if competition is strong enough to eliminate excess profits, the resulting equilibrium will be a monopolistic competition one of excess capacity and unnecessarily high unit costs” (Nash, 1982, p69).

Nash also opposes the possibility of long-run abnormal profit operation in this structure, claiming that market suppliers would be naive to be so short-sighted as to allow the potential for market entry by operating at above normal profit levels even though this is possible in a growing market with prices being higher than that which could be offered (Hardwick, 1994). Nash argues that if market suppliers maintained lower prices they would naturally secure a higher market share free from the threat of market entry by new suppliers, leading to the conclusion that;

“If a price war does emerge, it is likely to be the operator with the greatest financial strength, rather than the one with the lowest costs, that wins. Financial strength may result from having profitable operations elsewhere” (Nash, 1982, p70).

This was demonstrated at deregulation in the competition between British Coachways and National Express, the latter having enough financial resource to

overcome the intensive competition waged, and also today between National Express and Stagecoach Megabus, the latter this time having financial resources to sustain competition with the dominant firm and eventually carve out a long-term market position – not replicated in Europe where entry to newly liberalised markets saw Stagecoach unable to sustain services in competition with often state bank-rolled operators, for example in France and Italy.

It is notable at this stage that the process of maintaining market position using cross-subsidisation from other areas of a firm's business sits juxtaposed to the conditions for a contestable market where such cross-subsidisation is disallowed and where anti-competitive activities are discouraged, and equitable use of infrastructure, resources and process is required.

In markets that are in a state of monopolistic competition market power manifests itself through the ability to differentiate products and therefore have some form of price, quality, and quantity control, possibly being able to divide the market into segments using these criteria. For example, Brian Souter now talks of a three-tier express coach structure within the Stagecoach Group in Scotland; Megabus, CityLink and Gold are all used to segment passenger types, fares, and service levels - these tailored to maximise profits in each segment and increase market share.

The structure's application to the deregulation of express coaches is interesting; easy market entry afforded through contestability allows the potential for the numerous firms required and the structure supports the creation of choice, albeit at different costs to the consumer than may be efficient, through product and price differentiation. Price discrimination has latterly been allowed to occur using yield management where the same product (coach departure and service) may be sold at different rates depending on the time of booking and what the market will bear in relation to demand and competitor pricing. This adds further technicalities to the market conundrum and the structure also provides a certain level of inefficiency in production, explained simply as the cost of choice and 'differentness' (Chamberlin, 1933) – this inefficiency likely to manifest itself as waste, a criticism of the model argued by Nash (1982), but a likely consequence in passenger transport where the product can seldom be 'stored'.

In the long-term the structure will see profits tend to zero as demand declines and costs increase – potentially symbolic of the 1970s prior to deregulation, though competition was also limited by road service licenses (RSLs) (quantity) restrictions. However, in a free market (post 1980 Act) the dynamics of the real world and the allowance for a firm to differentiate its product and exercise some market power allows a good firm to run at above normal profits for the long-term period through innovation and keeping pace with changing customer trends. For example, the adoption of e-commerce has removed the need for physical tickets, manned offices, and customer trends have moved back toward kerb-side pick-ups and away from central stations for convenience, unless these stations are well located to other transport modes or main population centres.

Chapter 3 – The UK express coach market

3.1 Overview

The hypothesis questions the lack of continued activity in the UK express coach market by small to medium sized firms. This is in regard to very early intensive activity followed by almost total inactivity by these firms even though the freedoms of the Act and removal of entry barriers prevails and have indeed been strengthened through e-commerce and the increased popularity of kerb-side passenger access.

Changes to the market from 1980 and those to the market structure in the short-term period demonstrate a movement from a controlled monopoly characterised by state control of quantity, to a short period of monopolistic competition, this giving way to a longer term dominant firm oligopoly structure as the market settled into a new equilibrium.

The short-term results of deregulation following the Act delivered the anticipated changes to the market as hoped for by proponents of the deregulation process. By short-term, we refer to the period from deregulation to the end of the 1980s. Though contestability existed in keeping the market in check, the new equilibrium state structure did not sustain this.

The market, before deregulation, was subject to market control processes dating back to the 1930 Road Traffic Act. This Act sought to remove wasteful competition from the near perfectly competitive market that was in situ following the First World War. However, market forces had already exhibited some self-regulation through the use of 'coach pools' and the 1930 Act in removing duplication and underutilised resources created further 'coach pool' operations. Coach pools were, and still are, an innovative business model and in the UK, they stimulated the skeletal national network of long-distance travel – halted only by the Second World War - we see today.

The following years saw a drive for nationalisation, first of the railways and then the road transport market – this resulted in a pseudo state run network – partly state (former Tilling) and partly independent (BET and others). Developments outside of the market aided its progression – motorways, A-roads (trunk roads), vehicle technology, and a continuation of home-based tourism.

External factors started to erode the traditional market through the 1960s and 1970s such as; high-speed rail developments; an increase in cheaper private car ownership / use; the start of overseas package holidays; income and social mobility increases. During this period and following the 1968 Act full nationalisation of the market coincided with the peak in domestic long-distance coach use at circa 23 million passenger journeys (Anderson and Frankis 1985). Nationalisation brought austerity, a lack of innovation, basic 'no-frills' services levels and patronage decline to a pre-deregulation level of 9 to 10 million annual passenger journeys. Of note is 1980; the year as a whole being 9.8% down in passenger numbers over 1979. However, for the last three-months after deregulation, passenger journeys increased by 16.2% - showing the substantial first nine-month decline and a significant increase after the Act and based on only a 2% network mileage increase (NBC Annual Report, 1980).

In the period of decline the coordinated state network was branded National Express (from 1972) and re-shaped through CoachMAP (1978-79) – preparing the network for competition following deregulation. This re-shaping moved the network away from regional hubs and made better use of the emerging motorway system and direct connections between London. This was very different to the experience in Scotland where Scottish Bus Group (SBG) subsidiaries (all nationalised) continued under their own brands with no coordinated network - meaning a fragmented system ahead of deregulation. Furthermore, services were mainly long-distance buses with little 'coach' use. Here, the deregulation experience and market structure differed because of each region's approach to business structure in the 1970s; had National Express remained regionalised then the following market structure and resultant long-term competition may have been very different - potentially looking more like the recent German experience.

3.2 Summary of events before 1980

The market in which scheduled express coach services operate in the UK has evolved in economic terms over a sustained period. A series of key events has shaped it; from the 1920s boom in road passenger transport, the following prescriptive regulatory frameworks imposed through the 1930 and 1968 Acts, and latterly through the freedoms afforded by the 1980 Act and the following years of competitive market forces – these being free to shape the market and the actions of those within it, albeit less free of barriers and external competition than the 1920s.

3.2.1 Early years

The supposed freedom of the market to develop and operate in a contestable market environment beyond the 1980 Act was not a new approach to the scheduled express coach industry, though the notion of contestability was.

The boom in passenger transport in the 1920s saw a rapid rise in the number of road transport services. Prior to this, experimentation with long-distance travel had taken place with the Vanguard Omnibus Company pioneering regular leisure-based services between London and Brighton. However, following the serious Handcross Hill accident in 1906, there was little development of the long-distance market until after the First World War when an era of apparent 'chaos' quickly developed (Aldcroft, 1974). Initially, this fierce competition was across shorter distances, but the market quickly evolved and splintered into two areas; local bus services for daily use and a leisure market prompted by the development of charabanc ('chara') services.

In this period, the market structure was arguably as close to perfectly competitive as the market has ever been in the UK. This was achieved by; an oversupply in labour and surplus commercial vehicles following the end of the war allowing quick and easy set-up of small (one-man) firms, and; few legislative barriers to entry, meaning many firms could operate. Competition was so numerous that passengers dictated prices for travel and products were close to homogenous and nearly all consumed due to a lack of substitutes.

Changing the face of long-distance travel, charabanc services brought cheap mass long-distance transport to the public for the first time. Through the conversion of surplus army lorry chassis to rudimentary leisure coaches across one-deck, services to the coast using vehicles which seated 24 or more people became very popular.

It was at this stage that the long-distance market began to move away from a structure approximating perfect competition to one closer to imperfect competition. While the number of buyers in the market remained high, the number of firms began to fall as some failed to sustain the high levels of competition. Additionally, there was a significant move to differentiate vehicles and services to create higher market shares – innovations such as roofs, pneumatic tyres, sleeping berths, and observation coaches all played their part in seeing rapid development of the market and a change in structure stimulated by technical advances.

For the railways the inter-war years saw a consolidation of much earlier and rapid pre-war growth encouraged by the 'British' sense of free enterprise in that period (Nock, 1980). After the First World War steps were taken to maintain the efficiencies and coordination of the railways. Triggered by the economic crisis railways found themselves in, new laws were imposed that saw four groups of lines formed and over 1,000 miles of railway progressively closed from 1923. This contradicted the road passenger market where expansion and alliances saw increased competition but did provide the footing for rail to compete more effectively with road transport.

Following this early period further diversification occurred. Continuing improvements in vehicle technology set the scene for regular (scheduled) long distance services and the mail coach network of the 1800s (both mail delivery and long-distance passenger travel) created the template for the express motor coach network. Two forms of express service developed; in 1920 Royal Blue operated a twice daily service that was 'non-stop' between Bournemouth and London (prompted by rail strikes) and the entrepreneurial enterprise was running twice-daily by 1921, and; Greyhound Motors provided the first 'scheduled' long-distance service where passengers could travel end to end or board and alight at

various intermediate stops. This service between Bristol and London commenced in 1925 and followed the same route from Bath to London used by mail coach services from 1782 (Gerhold, 2012).

The network comprising both forms of service grew as mechanical reliability became common place amongst operators and their vehicles. Although the expansion of the network from the mid-1920s onwards was rapid, some restrictions remained in place through local authority licensing laws. These were erratically enforced creating an uneven platform for market development until the 1930s. With such an explosion in development and use, there was increasing concern over the waste of resources in providing services, and the likelihood of a saturated market that may quickly collapse. Furthermore, the ferocity of competition had led to accidents and wider safety concerns over vehicles and the crew that operated them.

With the market now in an imperfectly competitive state the opportunity for some level of self-control and efficiency came through the neoclassical route of cartels. In the observed structure, the long-term results of the market would tend to zero profits, unsustainable for most firms and a prospect that stimulated innovation. With fierce competition and evident waste in the market there was also growing pressure for regulation which would likely limit long-term profitability. Innovation therefore came through the appeal of a singular network approach across as larger area as possible.

This vision was achieved through the development of 'coach pools' - something that has similarities to a cartel and where a group of firms work together to set market prices and seek protection from market forces as a collective. Pragmatic coach owners, such as Shirley James and Len Turnham, promoted coach pools (Paramor, 2007) as they saw the value in sharing services and resources combined with a common approach to marketing and co-ordination. One such pool was the London and Coastal, commencing in 1925 and comprising nine initial members. The object of the pool was to eliminate harmful competition, centralise and reduce administrative and planning costs (extending the period for profitability), and ensure back-up facilities existed at each end of a route to aid reliability. Seeing the benefits of this approach in the south and east of England

more pools developed through the 1920s and notable amongst these was the Yorkshire pool which saw up to five companies pool services between Yorkshire and London by 1929 (Paramor, 2007).

Although coach pools began to widely develop, there continued to be widespread competition on high volume routes. This activity stimulated government action, designed to remove wasteful competition from the market (Royal Commission, 1929). The 1930 Road Traffic Act placed heavy restrictions on fares, timetables, and quantity in the market as well as allowing the railways to object to any changes to the coach network. At a stroke, the Act removed notable competitive examples such as the eighteen service providers that had developed a total of 58 timetabled journeys between London and Oxford each day by 1930 to just two providers (Crowe, 2012) and regulated wider competition (Anderson and Frankis, 1985). In this way, the Act enforced a route by route monopoly through quantity restrictions. In this new market structure, there was the potential for a welfare 'deadweight' loss. This occurs when a perfectly competitive market (or near perfect) moves to a monopoly with no change in costs to operate but real increases in price to the consumer (Hardwick, 1994). The Act avoided this by requiring fares to be agreed and set as part of the issued licence.

The Act also regulated quantity in the road passenger transport market by defining three forms for which new road service licenses (RSLs) would be provided by the newly formed Area Traffic Commissioners (ATCs) - quasi-judicial bodies who administered and monitored the quantity controls required through the Act (Robbins, 2007). These markets were:

- Stage Carriage – passengers carried for hire and reward at separate fares between stages. A service that stops along a line of route to pick up or set down passengers. Minimum or maximum fares imposed on the licence;
- Express Carriage – passengers carried for hire and reward at separate fares for a journey from one (or more) points, to one (or more) common destinations. Not stopping to take up or set down passengers' other than those paying the appropriate fares for the journey and subject to minimum or maximum conditions imposed at the point of the licence granted, and;

- Contract Carriages – motor vehicles carrying passengers (as one group) under a specific contract for hire and reward at a fixed sum or agreed rate.

The Act outlined operating conditions for each market in terms of how vehicles could be used under each market condition (sections 67 (1), 68 (1), 72) and permitted (in section 72 (4) (b)) that fares shall be fixed to prevent wasteful competition with alternate forms of transport along the route (or part of the route) – although intended to be discretionary (section 72(4)) this was in practice enforced by the ATCs (Hibbs, 2003). It also aimed to improve levels of traffic safety through restrictions to speed; a maximum speed limit of 30 miles per hour set for all vehicles adapted to carry more than seven passengers, and additional requirements for professional competence by owners and operating officers.

Unlike the 1980 Transport Act, the legislation passed in 1930 was not specific about minimum distances for service types, instead allowing the operator and ATCs make these distinctions based on the service details submitted at the point of application and when considering existing services and the railway network, including any objections lodged by these very powerful and protected institutions. This application was by way of an RSL – required for all road passenger transport services. At a stroke RSLs had the effect of removing competition on routes between major towns and cities as, typically, only one (or a very limited number) were available from the ATCs. Therefore, many routes passed to a single incumbent operator after the 1930 Act was passed.

Taking the earlier example of the service corridor between London and Oxford it is noted that upon the 1930 Act coming into effect competition between the two cities was reduced to just two firms; South Midland and Varsity Express (Crowe, 2012). This was permissible under the Act by the ATC as the two services followed slightly different routes. By 1934, between the two services, only fifteen timetabled trips operated per day – a significant decline from the pre-Act peak of 58 services offered by eighteen providers and potentially a degradation of social welfare and choice despite the likely higher seat utilisation and lower ‘waste’.

Through the example above it can be seen how the 1930 Act created restrictions on the number of services allowed within the market, both point to point markets, and wider geographical areas. This situation created a controlled monopoly (Hibbs, 2003), with a structure close to a coercive monopoly; a structure where no price competition, technical innovation (for product differentiation), marketing, or free movement into and out of the market is allowed. However, the Act did not prevent innovation within the boundaries of each RSL in terms of technical advancement and vehicle facilities, and services naturally required marketing to ensure buyer knowledge, meaning that while the remaining conditions of a coercive monopoly at this point are valid some conditions were not met.

The Act sought to regulate quantity and create pseudo-monopoly situations on each corridor. However, while this had the potential to fragment the network with many operators running legacy routes with little regard to the wider market the processes of restrictions on service quantity did force firms to think creatively about how they attracted passengers, expanded their reach and service portfolio, and maintained at least normal profits within this new, near coercive monopoly environment. These are briefly summarised as follows.

3.2.2 Coach Pools

In several notable cases firms revisited the idea of coach pools. As co-operatives, they created large networks of services, achieving passenger growth (peaking in the late 1960s) and maximising social welfare through this mechanism as well as more traditional process of merger and acquisition. For example, Royal Blue saw the 1930 Act as a spring-board for expansion, using the tools of acquisition and coach pooling (as a founder member of Associated Motorways) to expand the geographical reach of their network and fill spare capacity on inbound legs to the south and west of England (Anderson and Frankis, 1985).

Through the 1930 Act, coach pools had two main functions;

- (a) to create usable bi-directional services and/or networks with balanced timetables to attract the widest level of use from the broadest passenger base; and,

(b) to overcome the pre-1980 issue of RSL quantity restrictions that stopped individual operators expanding routes or networks over areas where parallel services already existed (with such applications being rejected on quantity and waste grounds).

The Associated Motorways model, the most well-known coach pool in the UK, paid no reference to traffic area boundaries but did coordinate services at defined hubs (e.g. Cheltenham) to allow interchange between member services. The network focused on travel to and from the south and west of England, London, and the Midlands. It's tenure spanned a period of tremendous change within the industry – commencing in 1934 as a minor pool of six operators focusing connections on the west of England and immediately adjoining regions, the operation expanded in both membership and geographic reach until its cessation (in name only) in 1974 as it passed into the National network, six-years after the 1968 Transport Act restructured existing nationalised operations, placing the Tilling Group companies into the newly-formed National Bus Company (NBC). This also incorporated the BET Group companies, sold to the state at this time, and leaving municipalities under local control alongside many private independents, five years prior to deregulation of the long-distance coach market.

Associated Motorways helped to shape the network footprint that was seen from 1980. The coach pool spanned the period of the Second World War (though suspended for part of this time) and was an integral part of people's social mobility in the immediate post war era when rail was suffering from significant damage and neglect with few funds to reconstruct the system.

Figure 3 shows the reach of the coach pool by 1948 and has synergies with the National Express network through the 1970s, before rationalisation meant the loss of several cross-country services and links such as those in Cornwall (Dean, 1983).

Figure 3: Associated Motorways network map 1948



Using connections to make more efficient use of vehicle and crew resources saw coach pools make extensive use of the 'hub and spoke' operating method. In the case of the 1930 Act this efficiency was initially driven, by the lack of good direct road connections between major cities and towns as the motorway network was yet to be developed. Coach pools allowed each operator to add connections to further afield cities and towns to its 'home' network, attracting passengers that it may not have been able to otherwise use their services (an early example of the network effect also noted in 3.2.4) and later in 8.2. All but one operator within the pool operated their own separate branded network and it is arguable that these benefited widely from the network effect of the Associated Motorways network. The coach pool was simply a marketing organisation and each company was required to operate an agreed amount of service mileage to allow overall operation of the network - in return receiving back a commensurate level of profit from ticket sales.

Lessons learnt from coach pools give economic arguments for co-operation;

- The wider benefits of a network over lone services – e.g. through tickets;
- Mitigation of wasteful competition with resources better coordinated;
- The reach and impact of a singular branded and marketed network;
- Operation from a single hub creating better connections and information; and,
- Centralisation of administration and consequent cost efficiencies.

In the same period as the 1930 Act national rail services continued, including through the Second World War, albeit with a preference for freight and troop movements, and provided a skeletal and basic national network for the public. However, following the war, the rail network struggled to improve quickly. Political change saw a move to nationalise critical industries, such as coal and the railways. With infrastructure that had suffered through the rigors of the war years the railways were quickly surpassed by coach in terms of passenger growth through the late 1930s and 1940s and this hastened the need for market structure change, from line by line monopolies to state ownership and a controlled monopoly. In contrast, the quantity controls still in place in the post war era for coach services stimulated network development and innovation, allowing it to capture market share without the wasteful competition of diverted resources – important in difficult economic times.

3.2.3 Exogenous factors triggering operator innovation

The opening of motorways in the UK stimulated some innovation within the express coach market even though A-Roads and dual carriageway by-passes had been in use since the 1930s. Independent operators could take advantage of faster point to point roads as did the group operators. Ribble (BET) pioneered the 'Gay Hostess' express services from the North West to London in the 1960s with the opening of the first motorways, the M6 Preston By-Pass in 1958 and the M1 in 1959, stimulating the development of specialised double-deck vehicles with at-seat hostess service and on-board washroom facilities.

A similar innovation saw the motorway between Birmingham and London stimulate innovation through increased operating speed. Midland Red introduced motorway services using the M1 between the two cities and took advantage of the initially speed-limit free operating conditions for seven years using specially designed single deck coaches built by the company itself to ensure a unique niche market product and often travelling between 70 and 100 miles per hour (Richards, 2010). At one point in the early days of the new service the shortest journey time between the two cities was recorded as 1 hour 40 minutes.

The development of the motorway network in the UK also aided the shift away from co-operative networks that relied upon the benefits that their 'hub and spoke' operating model gave when applied to a slower network of A and B road connections between towns and cities. With motorways providing fast point to point times and extending the reach of singular firms more direct routes by independent and group companies were set up in isolation - the nationalised network (see 3.2.4) further compounded the effect and saw remaining coach pool activity significantly decline. Ahead of deregulation National re-cast its network to make better use of motorways, maintaining a reduced hub and spoke operation it refined connections between principal cities and towns while keeping a host of intermediary locations through its cross-country network (these would be further stripped at deregulation by resource reallocation).

Analysis of post deregulation corridor competition also argues positively for the beneficial effects of improved road infrastructure. Indeed, for the South West corridor which saw heavy competition from deregulation between Devon and London, the improved road links may have contributed more to passenger growth and corridor success than the freedoms alone created by the Act with journey time reductions in the magnitude of 4-hours observed due to the completion of the M5 to Exeter and work to make the A30 and A38 roads dual carriageways (Dean, 1983).

3.2.4 Nationalisation

As coach pools were established beyond the 1930 Act several firms became independently owned by either Tilling or BET - both large bus operating groups. The railways (private firms) also had significant interests in these groups, however, the 1947 Transport Act began the process of nationalisation; starting with the creation of the British Transport Commission (BTC), a holding group which controlled British Railways from 1948, and due to the railways' interests in Tilling and BET these groups also - moving these and their coach pools into a semi-nationalised state. This increased further when Tilling entirely sold out to the BTC in 1949.

At the same time, nationalisation of the railways enabled standardisation to drive efficiency and innovation through the potential for economies of scale. Investment in diesel locomotives to improve speeds and reliability as well and large-scale electrification and infrastructure projects followed in successive years after a Government change in 1952 which failed to see a reversal of nationalisation or these processes. Centralised control was still seen to allow greater regional freedoms (Nock, 1980) and these were important as the industry looked ahead to ten or more years to map out the competitive market it would find itself operating within.

This strategic thinking, stimulated by decisions being required for infrastructure replacement and increasing daily losses on the current network, prompted reviews in mid 1950s and again in the 1960s. While express coach services enjoyed strong passenger growth and high levels of use until the late 1960s, initially using expansive networks of hub and spoke connections across major A and B roads and latterly the motorway network, the railways were undergoing significant change. Although nationalised, losses were high and the Beeching reports 'The Reshaping of British Railways' (1963) and 'The Development of the Major Railway Trunk Routes' (1965) provided the stimulus for extreme rationalisation. Based on 'making the railways pay' the first report recommended that 55% of network stations and 30% of route mileage be closed – replaced instead by a variation of 'hub and spoke' that aimed to see private car, replacement bus, and road haulage connect passengers and freight to 'rail-

heads' (hubs). However, with the motorway network quickly developing and private motoring becoming cheaper and more accessible the reality saw these journeys being made entirely by road and a total loss of traffic to the rail network.

Most line and station closures were carried out with activity peaking in the mid-1960s and completed by the early 1970s. One fundamental error with the closures resulting from the Beeching reports was the underestimation of the importance of the 'network effect' of connecting legs – branch-lines. In economic terms, the cost to maintain the connecting legs is often unknown and their loss can have a larger loss to revenue than the operating savings made in addition to the social welfare losses suffered by passengers left without access to the network. The same effect was exhibited when deregulation of the coach market caused shrinkage of the cross-country network enabling resources to be focused on trunk routes, but with little consideration regarding access to these routes for provincial passengers.

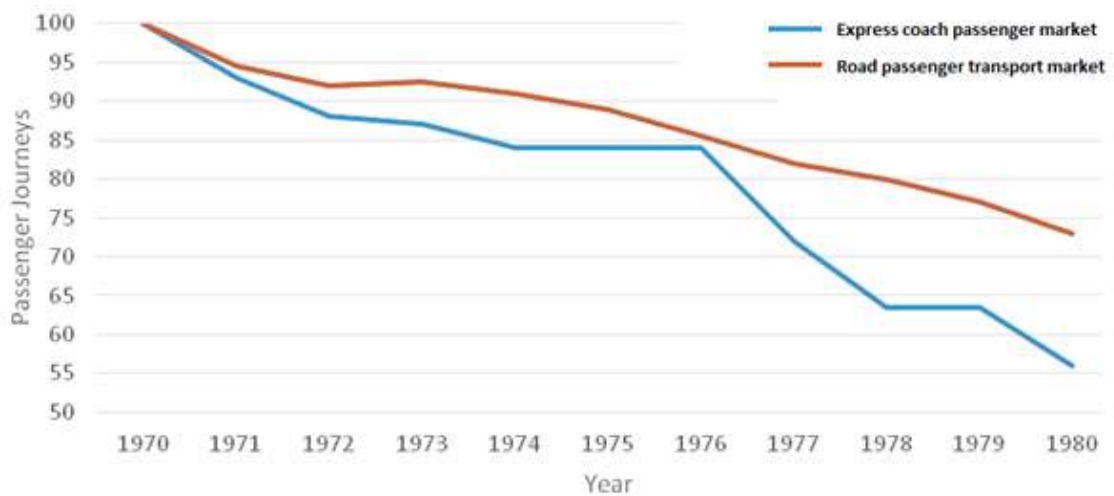
For the road transport market, the 1968 Transport Act saw the gradual nationalisation of local and long-distance road transport in the UK resulting in the formation of the NBC in the same year. Nationalisation was achieved through acquisition and not compulsory purchase with many independent firms remaining and full nationalisation of the market never completed.

3.2.5 The decade prior to deregulation – the 1970s

The UK scheduled express coach market demonstrated a steady decline in passenger numbers from 1970, despite attempts by the NBC subsidiaries in England and Wales to create a single operational unit, 'National' from 1972 to promote an identifiable and single network.

Figure 4 comparing the express sector to all road passenger transport, highlights a decline in express passenger journeys, of approximately 44% over 10-years, showing passenger journeys as an index figure (1970 = 100%) and equating in real terms to 69 million passenger journeys (Douglas, 1987).

Figure 4: Express and Bus Patronage (from Douglas, 1987, p27)



Of note is the rapid decline in the express market in a very short period between 1976 and 1978 as well as in the last year of the decade;

“The principal causes of this latterly quite spectacular decline were the recession and the encroachment of BR [British rail] in the student, senior citizen and off-peak period markets” (Douglas, 1987, p26).

However, further causes of the decline may also be due to the following reasons (drawn principally from Douglas and White):

- The modification of routes to claim fuel duty rebate (the forerunner to today’s Bus Service Operators Grant) as defined by the 1968 Act meaning whole routes or several route sections were re-registered as local bus services;
- Changes to minimum fare levels that classified express from other services; with these raising some services fell into the local bus service category;
- Decline in ‘works contract’ services which due to very few defined stops (often only two) were deemed express in their classification, and;
- Rising operating costs that discouraged independent firms, coupled with tighter driving hours regulations.

Although attempts were made to reverse the decline in passenger journeys the overall market was hampered by the restrictions still in place for RSLs. Additionally, the railways right to object to proposed route and fare changes by operators coupled with incentives given to the inter-city rail sector by the Government exacerbated the decline. Regarding inter-city rail, the Government required this sector to cover its overheads leading to significant fare reductions (in particular off-peak) and competitive marketing and promotion of the coach markets traditional passenger market to grow their own passenger base (Douglas, 1987).

Ahead of the 1980 Act the established long distance scheduled coach network was operated in England and Wales under the National (Express) brand and formed a single division within the otherwise regionally fragmented NBC framework. This process started in 1972 when all NBC subsidiary scheduled coach services were brought under one singular timetable guide and promoted as 'National'.

This process saw 300 coaches initially carry thirteen million passenger journeys (from a total market of approximately 61 million – Douglas, 1987) on a network with popular destinations such as London, Bournemouth, and Blackpool. The guide and branded network was initially 'National' (displayed in alternating blue and red letters on uniformly white coaches). However, in 1973 the revised name 'National Express' was used on publicity and coaches, setting a single brand designed to make travel simpler and seamless between vehicle and crew providers. Based on this approach Figure 5 shows passenger volume data and a peaking in use immediately following the re-brand to National Express but a decline after the introduction of InterCity Rail by British Rail from 1977 (NBC Annual Reports);

Figure 5: National Express Patronage (re-brand to deregulation, 1973-79)

Year	Passengers (million)	Turnover (£ million)
1973	11.0	-
1974	12.0	-
1975	13.1	-
1978	10.0	26.0
1979	10.4	28.0

The long-distance market prior to deregulation was not wholly the preserve of the nationalised companies;

“In 1980 scheduled services between towns and cities were mainly operated by the state-owned NBC (and in Scotland SBG) company subsidiaries. However, a small collection of strong independent firms (such as Grey-Green and Yellowway) had created small networks and ran jointly on some routes with the NBC subsidiaries and so were able to access their terminal facilities as a result – reducing the problems with entry to the market considerably”. (Townsin, 1992, p19).

This evidences of independent activity in the market during the 1970s (ahead of deregulation) which moved to a level of cooperation with the incumbent, National (in England and Wales) post deregulation and was reminiscent of the former associations and coach pools which had found success in the restrictive RSL era.

With larger independents in operation on the network and holding RSLs for trunk services there was a credible threat from the further growth of these companies upon deregulation and the entry of new firms, of similar or smaller size, on otherwise untouched network areas. Interestingly, Grey-Green (a strong independent operator of express services through the 1970s) initially joined the short lived British Coachways consortium in 1980 to compete with National Express before leaving to resume sole operator services and later co-operating with the market incumbent. Seeing the potential threat to its market dominance and established identity the NBC's National Express centralised division, which was responsible for planning the network and setting fares policy, began gearing up for the new market environment that the Act would facilitate ahead of deregulation day. In so doing National Express undertook several activities:

- (a) Use of the Manchester – London service in the summer of 1980 to test fare elasticity and trial 'stand-by' fares (Birks, 1990);
- (b) The 'EXTRA' computer reservations system was introduced across the network of National Express ticket agents in 1978. This immediately delivered an improved service to customers and booking agents;

- (c) Notable networks, such as Royal Blue, were incorporated into National Express through the 1970s (and 1980s) (Anderson and Frankis, 1985). Of note are regional subsidiary names (former network owner branding) such as Black and White, Ribble, and Greyhound which were not dropped from the livery of coaches until 1986 to simplifying and promote a single network and brand, and;
- (d) In 1979-80 National Express undertook a market research programme called CoachMAP. This built on the local bus Market Analysis Project (MAP) and was designed to systematically filter vast quantities of data regarding travel patterns and optimise the coach network;

“The techniques employed were not dissimilar to MAP and contributed to the development of a network of frequent, regular direct express coach links between principle centres using the motorways and providing interchanges at certain key points.” (Birks, 1990, p411).

Whilst these factors significantly helped in preparing the incumbent National Express prior to deregulation, two exogenous factors also aided it:

- (a) Some of the barriers to market entry enshrined in the 1930 and 1968 Acts were not fully repealed in the lead up to (1970s) or post (early 1980s) deregulation – critically one of these was access to the main London coach terminal, Victoria Coach Station, which National Express had the monopoly over; and,
- (b) A restructured network making better use of the motorway system in the UK.

Additionally, long term planned developments in rail (still state controlled) would come to fruition through the late 1970s and in time to meet head-on with the deregulation of the inter-city coach market. Railways in the 1970s were focused on inter-city travel with the Government keen for this to be a self-financing market sector (Douglas, 1987). Planning for the network had begun a decade earlier; through actions following the Beeching reports and acknowledgment that high average journey speed, convenience emulating the private car, safety, reliability,

and increased on-board standards would be critical in a future passenger's choice – the importance of each fluctuating in relation to journey length (Nock, 1980). Predictions regarding competition for passenger traffic in the late 1970s and 1980s pointed to rail being competitive for all journeys up to three hours (typically distances of 200 to 250 miles). Beyond this domestic air would increasingly have a dominant market share, and for journeys between 100 and 200 miles rail would see intense competition with road transport (public and private) due to the motorway network (Nock, 1980).

While both road and rail sectors were under state control, both anticipated the future in different ways; road using exogenous factors to re-shape its network ahead of new competition with an emphasis only on lower trunk journey times, whereas rail took a more comprehensive approach, including the passenger experience as part of its plans over the same journey distances.

3.2.6 The stimulus for change

A Government pursuing the privatisation of a raft of nationalised utilities and industries created the path to inter-city coach deregulation. This approach was supported by the continuous decline under state control of the market in the 1970s - a reversal of earlier fortunes where until the mid-1960s the market for long-distance coach travel continually grew due to; a lack of car ownership; post war economic recovery, and; a focus on UK destinations for annual holidays. The latter decline was due to changes in the categorisation of the market and positive developments in rail and private transport that enabled greater and lower cost personal mobility.

It was felt that private firm intervention would make a more cost-conscious industry and see a reversal of the passenger decline. Rather than cutting the network and replicating the Beeching approach to rail of the 1960s, it was felt that allowing free-market forces to exist, the market would find a new, profitable, equilibrium, matching supply to demand and maximising social welfare. However, there was an argument for continued control due to potential economies of scale within the industry (Douglas, 1987).

Establishment of this would be critical in how the Government tackled changes to the market. If the sector could be classed as a natural monopoly, such as energy utilities, then there may be little to be gained from regulatory change as the economies of scale would be too great to allow new market entry.

With the 60-year period of long-distance coach service development prior to deregulation being notable for its changing market structure – from near perfect competition to a controlled economy (Hibbs, 2003) and stimulated by various market interventions, not all of which being legislative such as technology improvements, it was likely that obstructive economies of scale did not exist. Indeed, Douglas concludes through detailed studies of wider inter-city coach markets that in the UK;

“The weight of empirical evidence suggests constant or very weak economies of scale. Therefore, to have continued entry control on the basis of economies of scale would have been ill-founded” (Douglas, 1987, p66).

However, in some areas of the market there were advantages to scale; wider spread of overhead costs to offset buyer price; efficiencies in maintenance (cost and time advantages); brand creation and recognition (important for sustainable market share); faster entry / competitive retaliation through lower sunk costs and more available resource.

With economies of scale not sufficiently in evidence to prevent free-market forces to occur (but some advantages of scale being seen nonetheless) a legislative process was commenced to address and halt the decline in long-distance coach passenger journeys – removing the market from state control (and cost) and providing a model for which wider transport deregulation may later be achieved. Evidence suggested that a lack of regulatory control and the provision of easy market entry and exit would allow a market to tend towards one of three states (Samuelson, 1976); single monopolist; oligopoly, or; imperfect competition. Each achieves differing levels of social welfare and market freedom as noted in Chapter 2. The way in which the market moves is a product of the initial landscape prior to regulation removal (See Chapter 8 and Figure 26) as well as the level of barrier removal through legislation and competitive process. In terms of the express coach market it was felt that the restrictions brought by RSLs created

difficulty in utilising spare resource between markets for independent operators who were traditionally entrepreneurial and competitive in nature, and who had localised critical mass and the ability to provide new capacity. Free-market economics applied to the express coach industry would transform the market with use of contestability as an economic tool (or process) to regulate price in the long-term even if a single monopolist structure emerged instead of the much hoped for competitive market structure.

3.3 Deregulation – the 1980 Transport Act

The replacement legislation to that of the 1930 Traffic Act and subsequent Acts in 1947 and 1968 came into effect on the 1st October 1980. At a stroke, it claimed to remove barriers to market entry and provide the platform for a flourishing new network of competitive long-distance services that would offer choice across a range of areas for the travelling public. The market could now develop and promote its own fares, timetables and most importantly of all could add additional services (in the case of incumbent operators) or enter the market with new services (in the case of entrepreneurial firms) - market entry was now possible at 'apparently little cost' (Robbins and White, 1986).

The 1980 Transport Act, brought in by a Conservative Government whose manifesto sought a greater role for the private sector across state supported industries from 1979, looked to fundamentally review the 1930 Transport Act; radically amending its principles to bring about more competition within the market place – a reversal in many ways of the original Act, and the nationalisation created through the 1968 Act.

To achieve this competition, it was felt that the vibrant and highly populated independent coaching sector, hitherto focused on operating private and contract hire services in a very competitive market with few regulations could bring the desired levels of competition and choice to the establishment. New approaches such as product differentiation, quality enhancements, and equipment innovation, were within the private sector's gift for use in driving up public demand for services, delivering operational efficiencies, and bringing down the costs of service delivery and, *vis-à-vis*, coach fares.

However, Cole (1998) suggests that small coaching firms at that time might instead have taken a pessimistic view of deregulation and the opportunities open to them, and Hibbs (1986) notes that many small operators lacked entrepreneurial drive, and were put off competing due to their size, the high risks, and the perceived dangers of moving into a new market, with such companies likely to remain in their chosen sub-market.

To stimulate and facilitate the private sector's entry into the market the Act used the theoretical mechanisms of contestability to create market entry (Robbins and White, 1986) and more importantly, give market forces a 'free hand' to determine a new economic structure to achieve the Act's aims.

In so doing, the authors of the Act were essentially working on the economic principle of laissez-faire (Pass, 1993). The belief was that a market place such as this would be an attractor to a myriad of operators who were able to enter the market and diversify from their core activities with relative ease, securing year-round work that would either remove the risks of seasonality inherent in the independent coach sector, or build on their already prosperous operations by tapping into their local passenger base – akin to Royal Blue in the 1930s.

This approach remained the most significant goal of the Act - to experiment with, and prove a place for, free-market economics in the public transport industry. The legislative change was focused on opening the scheduled express coach market to wider competition than had previously been allowed through the 1930 Act, itself regulating quantity, quality, and price for all public road transport services apart from those of private and contract hire for 50 years.

The contestable market structure would create the environment for freedom of movement into and out of the market, by any firm, and deliver three supporting goals, summarised by Kilvington and Cross (1986):

- (a) the removal of bureaucratic restriction;
- (b) to ensure that almost everyone gains good access to public transport, and;
- (c) the provision of maximum choice to the user, by facilitating competition.

Delivering these goals would not only provide stability for small to medium sized independent firms to test the market, but would also, in theory, allow consumers a large level of choice with freedoms of entry and service design allowing niche services to develop and product differentiation to occur.

The contestable market structure would also ensure fares would be kept to levels where only 'normal profits' could exist due to the permanent threat of competitive market entry. The Act sought to exploit this as a benefit; the threat of market entry would, either as a 'hit and run' or a sustained operation, ensure that fares would remain competitive. This would see any incumbent operators attempting to use market power or dominance to excessively increase their own wealth face competition and a potential loss of market share.

The official line regarding that new Act tended towards the goal of creating as close a perfectly competitive market as possible. As this extreme market situation is commonly seen as an idealised structure the Act had two potential outcomes:

- (a) the total shift of the pre-Act market structure to a wholly new situation with new conditions and outcomes as close to perfect competition as sustainable, or;
- (b) despite the application of the Act to allow increased market activity, little actual shift in market structure in the long-term (signifying a failure of the Act).

If the Act managed to achieve the first outcome, the change in market structure may realistically have seen the market move to a state of imperfect competition (or monopolistic competition); essentially a market with many buyers and sellers, the allowance of differentiated products, and freedom of movement for firms with the market, this being described as similar in all aspects to a perfectly competitive market save for the allowance of non-homogenous products (Pass, 1993).

If the second outcome occurred the Act would have facilitated a contestable environment but, either due to exogenous factors, or endogenous flaws within the Act's ability to remove all barriers to successful market entry, the market structure would remain static or at best move to a slightly better 'seller to buyer' ratio on the proposed spectrum, potentially signifying failure of its goals and legislative process. However, in achieving contestability the Act in this instance may still have succeeded and would at least allow for potential changes in structure in the long-term dependent on advances in factors and technologies effecting the industry - this is now the observed outcome and concluded through Chapter 8.

At the time of the Act however, it was supposed that if the second outcome occurred and a dominant operator did remain in place, but that operator had; been forced to innovate; better match supply to demand, and; only operate at normal profit levels this would not wholly be a failure (something perhaps now seen in today's market) Therefore, regardless of market composition, if more choice, lower fares, and better quality were resultant features of the market, akin to the 1930 Act enabling the development of a lean UK wide network, could it may be argued that the Act was successful. As such, much depended in 1980 on the reaction of the independent sector, the reaction of British Rail, and if the first casting of the Act was flawless in creating contestability - as discussed below in section 3.4.

Briefly, however, in terms of rail, the market, this remained state controlled under British Rail. Considerable state funding had developed a network of high-speed services on trunk routes to provide shorter journey times and British Rail was given a mandate to make these profitable and therefore self-sufficient - paving the way for intensive competition on corridors where rail and coach were close substitutes.

3.4 Deregulation – barriers to entry

Although the Act appeared to have created a 'level playing field' and the potential for a contestability there did remain some barriers to market entry, such as:

- (a) the need to register any new service, or change an existing route or timetable, with 28 days' notice (note that there was no notice period for fare changes and passenger trips had to be at least 30-miles in length);
- (b) access to some main 'hub' terminals (e.g. Victoria Coach Station, London) was restricted due to ownership by the NBC. This forced new entrants to use 'kerb-side' locations and impeded ticket sales and public knowledge of new services. In the days following deregulation over 65% of private operators ran services under the new Act that departed and arrived at car park or street locations (Barton and Everest, 1984). In 1980 'kerb side' access was deemed poor in comparison to the terminal operation, offering poor facilities and information – in contrast to today's market which sees kerb side locations as better access;
- (c) a staged process of access rights to termini seriously damaged the momentum of the Act and blocked new entrants from setting up services with attractive additions such as good quality facilities and information;
- (d) financial disparity between incumbents and new entrants; with National Express principally having already born the sunk costs of establishing a service through years of state ownership; however, in defence of this;

“The management of National Express was given a free hand by NBC to meet and respond to this competition, though no subsidy was forthcoming.” (Lloyd and Potter, 2000).

- (e) the NBC taking the opportunity of state ownership to develop a recognisable brand ahead of legislative change; reinforcing public trust as the established market leader and a recognisable service offering as National Express.

Of these remaining barriers, the most significant to detracting from free-flowing competition was the requirement to provide notice for new or amended routes. This requirement left a legacy of regulation within the sector and a large level of protectionism for the incumbent operator on any route where there was competition from a new entrant (this prohibitive situation is also seen in the recently liberalised German market). For an incumbent operator, the knowledge that a new entrant had applied to operate across its route gave it time to react to the threat. With 28 days' knowledge of the competitor's plans, the incumbent could take two courses of action:

- (a) fares and facilities could be altered to enhance the existing service, offering discounts on services that overlapped with the 'competitors' planned timetable and better passenger facilities (this could be immediately applied), and;

a counter attack to the threat could be lodged by the incumbent and serve to spoil the impact of the new service by very quickly mirroring or bettering it as the incumbent operator would not incur large sunk costs for this change. However, it is true that if no restriction on lead time existed a new entrant would still need to advertise a service prior to operations - alerting existing operators of the competition.

3.5 Deregulation – short term activity

From deregulation there was an immediate intensive period of competition (Robbins, 2007) between coach firms on several main corridors with often short-lived multiple competition within each corridor. Jaffer and Thompson state that the Act had;

“... an immediate and dramatic impact on the coaching industry. New companies entered the market, frequently offering innovatory services, and there were spectacular price cuts on the major inter-city routes” (Jaffer and Thompson, 1986, p45).

Although National Express had completed much preparatory work to meet, head on, the challenges that deregulation would create there was still an initial wave of competition across its UK network causing it to weather a storm of competition that manifested itself in two forms:

- (a) individual operators taking on an existing operator (often National Express) on a route where the new operator counted one end of the route as ‘home territory’. Such routes often centred on journeys to and from London (Thompson and Whitfield, 1995). Examples included Whittle’s ‘Goldhawk’ service and Swanbrook’s operations from Gloucestershire to London, and;
- (b) a consortium of operators working together as a co-operative to provide a comprehensive offering and attempting to remove some of the residual barriers facing new market entrants by using greater strength, depth and geographic spread to provide bi-directional frequencies, connections, and competitive fares, the main example being British Coachways.

Figure 6 provides as complete a picture as possible of the new market entrants (from 1980) that competed at deregulation. It shows the market entrants ranked by the distance (in miles) of these services provided;

Figure 6: New market entrants at deregulation (1980) ranked by trip distance

Operator	Origin	Destination	Distance (miles)
Stagecoach	Aberdeen	London	536
Stagecoach	Dundee	London	471
Stagecoach	Perth	London	450
Stagecoach	Stirling	London	417
Silver Choice (b)	Edinburgh	London (overnight)	405
Cotters	Edinburgh	London	405
Silver Choice (a)	Glasgow	London (overnight)	403
Cotters	Glasgow	London	403
British Coachways	London	Glasgow	403
Northwest Coachlines	Douglas / Isle of Man	London	299
British Coachways	London	Newcastle	283
Trathens	Plymouth	London	238
British Coachways (a)	London	Plymouth	238
Mid-Warwickshire	Leeds	Gatwick	234
British Coachways (b)	London	Paignton	216
Applebys	Hull / Cleethorpes	London	214
British Coachways	London	Liverpool	210
British Coachways	London	Bradford	205
Wallace Arnold	Leeds	London	196
Glennline	Exeter	London	196
British Coachways	London	Swansea	187
Travelways	Bradford	Isle of Man	170
British Coachways	Swansea	Birmingham	155
Morris Coaches	Bromyard	London	151
Parks of Hamilton	Aberdeen	Glasgow	146
Stagecoach	Aberdeen	Glasgow	146
Whittles	Bridgnorth	London	144
Knight Brown	Aviemore	Glasgow	140
Luxicoaches	Derby	London	130
British Coachways	London	Nottingham	127
Swanbrook	Tewkesbury	Oxford / London	120
Hogg	Boston	London	119
Elseys	London	Peterborough / Boston	119
British Coachways	London	Bristol	118
Robinsons	Leeds	Carlisle	117
Red Car	Norwich	London	117
Youngs	Norwich	London	117
JDW	Norwich	London	117
Flights	Birmingham	Heathrow Airport	116
Castleways	Gloucester	London	114
Swanbrook	Gloucester	London	114
British Coachways	London	Grantham	112
British Coachways	London	Bournemouth	107
Shaws	Coventry	London	97
Victory Tours	Salisbury / Andover	London	95
British Coachways	Bristol	Birmingham	92
Heyfordian	Banbury / Oxford	London	88

Operator	Origin	Destination	Distance (miles)
Shaws	Leeds	East Midlands Airport	83
Reading / Southend (BTs)	Reading	Southend (via London)	83
Renown	Eastbourne / Bexhill	London	80
British Coachways	London	Portsmouth	75
Ramsons	Ramsgate	London	75
British Coachways	London	Weston Favell	69
City of Oxford	Oxford	London	59
Wallace Arnold	Leeds / Bradford	Manchester Airport	57
Stagecoach	Dundee	Stirling	56
Swinards	Faversham	London	55
Whippet	Huntingdon	London (Barnet)	55
A C Coaches	Brighton	London	53
Ementon	Cranfield	London	51
British Coachways	Hamilton	Edinburgh (feeder)	48
Buffalo	Maulden	London	46
UMBH	Shoeburyness	London	46
Richardson Skylink	Sheffield	Manchester Airport	45
Stagecoach	Edinburgh	Perth	43
CK	Cardiff	Swansea	41
Smiths Luxury Coaches	Reading	London	41
Olsens	Medway Towns	London	40
Pilchers	Medway Towns	London	40
Glastonia	Cranleigh	London	38
Dale Coaches	Stirling	Edinburgh	36
Average Entry Distance (miles)			157

Figure 6 using data gathered from a range of research texts, commercial literature, and historic accounts shows:

- 71 new services commenced in the last quarter of 1980 following the Act;
- 22% of new market entrants were part of the British Coachways network;
- 66% of market entry was in the '0 to 150' mile journey length group;
- 27% in the '101 to 150' mile journey length group;
- 36% of the new market entries ceased their services before January 1981;
- 77% of the new market entries provided a service to/from London; and,
- 34% of these ceased before January 1981.

The Act facilitated huge potential for service type and choice and saw a significant take up of these opportunities in the first period of deregulation. However, this significant exploration by independent operators may have been down to the timing of deregulation and seasonality of the industry. October forms part of the low season for coaching, meaning that many independents had spare vehicles and crew to trial services at no significant additional cost. However, this period of trial was not long enough to build up regular demand to sustain the year-round operation and create a foothold in the market before the new tour-coach season began in early spring 1981.

This is the case when robust competition from National Express on such routes is also considered alongside inter-modal competition from British Rail. This competition being focused on price due and geared primarily to competition against National Express but with likely effects for new entrants establishing themselves in the same market. Because of this multi-faceted competition, many new enterprises ceased before the 1981 coach season; 43% by April 1981.

With 66% of market entry occurring in the 0 to 150 miles category, some of the intensive competition predicted by British Rail was realised. In fact, they predicted intensive competition on journeys between 100 and 200 miles and in this respect new entrants represent 37% of all entry (with the average new entrant route length being 157 miles). Five years after deregulation, 40% of the remaining 33 services were in the 100 to 200 miles journey category.

By the end of 1981 up to 46% of new services had ceased and only one new service was planned to start in the second quarter of that year. The table demonstrates the strength of the market when the journey length is no more than 150 miles. By motorway this would typically take three to four hours dependent on local traffic at each end of the route and this suggests the efficient working for a one-man crew, who under driver working regulations could drive for a maximum period of four and a half hours before requiring a minimum break of 45 minutes. With crew and fuel representing the main cost centres for any new venture, minimising each of these through efficient scheduling, high-speed/non-stop running, and limitations to a once daily service in each direction was essential – though perhaps not the vision of customer choice the government had planned.

It is notable that most new entrant services focused on providing a link to London, either as a commuter service or as a leisure focused daily return. This was essential for provincial operators as they did not have the ability to market return services effectively to the London ended market - something National Express could do due to its market presence and established sales agent network. Therefore, this forced a concentration on 'home' markets and inbound orientated services to London as they had brand presence and population penetration. This approach meant few post deregulation independent services began in London to serve regional UK towns and cities as the first leg of their journey – instead, this opportunity was left to the more ambitious network attempted by the British Coachways consortium.

Following the initial increase of market entry after deregulation and until the mid-1980s, National Express continued its focus on market retention using a mix of increased (displaced) resources and predatory fare pricing. This combined action resulted in a decline of independent market activity, with this only accounting for 10% of journeys to/from London by 1981, too low to sustain long-term passenger choice, and seen by some as potential failure of the Act (Townsin, 1992).

The early outcomes in Scotland were juxtaposed with England and Wales at deregulation. With no unified network of Scottish services prior to the Act, sustained competition thrived until the formation of Scottish CityLink in 1983. CityLink used a similar franchise model to National Express requiring several smaller operators as well as SBG subsidiaries, to provide branded coaches for operation across its newly coordinated network. However, as with the National Express model in England and Wales this began and then assisted the decline in competition north of the border. However, the resultant network within Scotland did still sustain longer-term competition in comparison to England and Wales due to the more extensive motorway infrastructure, direct motorway access into Glasgow, in a relatively smaller geographic concentration and the lower density (often single track) rail network. These culminating to ensure coach and rail competed more evenly on journey time and cost.

The Anglo-Scottish corridor was a separate market again, with coach competing with high-speed rail and domestic air services. This created huge disparities between travel times. At deregulation, National Express competed with SBG and Stagecoach, the latter concentrating on Anglo-Scottish services and using three service levels for customers by 1989 (50% of Anglo-Scottish services operated with standard coaches and 50% upgraded to higher specification 'super' coaches with low-cost 'no-frills' Magicbus services operated for a short period between Glasgow and London in response to competition from Bruce of Airdrie). However, Stagecoach abruptly left the market in the summer of 1989 to concentrate on the deregulated bus market (Thompson and Whitfield, 1995) with its services bought by National Express and initially operated as Caledonian Express before being absorbed into their wider network as Rapide level services in competition with Scottish CityLink's routes.

The corridor proved to be a fertile ground for innovation. The substantive distances between various Scottish cities and London stimulated a varied range of competition between both nationalised and independent firms. The SBG in expectation of significant competition replaced its fleet of long distance coaches ahead of deregulation, its only preparation ahead of the Act in the late 1970s. These standards were matched and exceeded at deregulation by independents, such as Cotters who experimented with a 'first class' area within the coach saloon, and Stagecoach who innovated with high-capacity double-deck vehicles.

3.6 Deregulation – the British Coachways consortium

On the 6th October 1980, a consortium of six independent operators launched a singularly branded network designed to compete with National Express. Unique to this venture was the focus on London as the hub, notable at the time as a stark contrast to all other independent market entry originating from the provinces.

The British Coachways network ensured connections through its London Kings Cross station facility (exceptionally rudimentary in comparison to Victoria used by National Express) and initially saw services provided by Grey Green, Wallace Arnold, Shearings Pleasureways, Park's of Hamilton, Morris Bros (Swansea), and Ellerman Bee Line as founder consortium members.

These operators through their 'home' locations across the UK created a skeletal trunk network focusing on links to the North East, North West, Yorkshire, Birmingham, South Wales and the West of England. British Coachways entered the market with a clear plan to run against National Express using fare competition as its principal, and ultimately only, tool to secure a foothold in the market.

Figure 7: British Coachways information showing network and fares

British coachways Summer 81 Services Commencing 16th May

ALL SYSTEMS RIDE GUIDE

Map showing routes to: ABERDEEN, MONROSE, PERTH, BRNOATH, EDINBURGH, GLASGOW, HAMILTON, NEWCASTLE, DUNDEE, MIDLESBROUGH, BRADFORD, LEEDS, MANCHESTER, LIVERPOOL, ALTRINCHAM, WAKEFIELD, SHEFFIELD, NOTTINGHAM, BIRMINGHAM, NORTHAMPTON, GRANTHAM, STAMFORD, PEELEBOROUGH, SWANSEA, CARDIFF, BRISTOL, LONDON, NEWPORT, EXETER, PLYMOUTH/TORBAY, SOUTHAMPTON.

YOUR LOCAL OPERATOR:
Wallace Arnold Tours Ltd.
7/9 PARK STREET, BULL RING, BIRMINGHAM
Telephone 643-6035

Summer 81 Services

British coachways

SUPER SUMMER SAVERS

SINGLE FARES TO **LONDON** OR **HEATHROW**

FROM:-	ADULT	STUDENT/CHILD
Swansea, Briton Ferry, Bridgend	£4	£3
REFRESHMENT STOP ON ROUTE.	DAY RETURN	£6.50 £5

ALL SERVICES LISTED OVERLEAF ALSO CONNECT TO:-
GATWICK AND **LUTON** AIRPORTS

SINGLE FARES TO **BIRMINGHAM**

FROM:-	ADULT	STUDENT/CHILD
Swansea, Briton Ferry, Bridgend	£3	£2.25

SERVICE Nos. 410 and 411 LISTED OVERLEAF CONNECT TO AND FROM
NORTH OF ENGLAND
AND **SCOTLAND**

YOUR LOCAL OPERATOR
MORRIS BROS
WALES
6 MANSEL STREET, SWANSEA, WEST GLAM. SA1 5SF
Telephone: (0792) 469900

The choice to use a geographic spread of operators that enabled effective crew and vehicle workings in each direction as well as ensuring useful daily trips out of London as well as too London, was sensible - as was the single name marketing approach that echoed the approach used by Associated Motorways. However, while the British Coachways operation focused on the concept of a singular branded network to rival that of National Express it failed to compete sustainably on cost. Unlike National Express, the consortium did not have the long-term financial resources to establish the brand and the network. Notable here is the comparison to more recent market entry by Megabus in 2003 in which the parent company, Stagecoach, planned for a three to five-year period of losses ahead of eventual profitability and sustained market presence.

Ultimately fare based competition proved a naïve approach. National Express's immediate reaction was to cut fares on all trunk routes by one third and at least match all other fares on routes where the two companies competed directly (Robbins and White, 1986) – thus moving to protect routes that may attract competition as well as defending its position where competition had begun.

To highlight the fare competition seen, the London to Liverpool route is considered:

- In 1975 period return fares were £5.35 and six services were operated, albeit it two being indirect. Journey times ranged from 5 hrs 45 minutes to 10hrs;
- By the summer of 1979, just prior to deregulation National Express offered three services as well as an overnight service. Return fares (period) ranged from £10.00 to £13.20 though the three-day services were marketed as White Arrow Express with return fares set at £9.00. Journey times for core services had fallen to a consistent 4hrs 35 minutes with the overnight being 8hrs 30 minutes.

Figure 8: National Express 1979 London/Liverpool information

Liverpool		Fares: S DR PR*				WHITE ARROW EXPRESS:				Liverpool			
Merseyside		Basic:	£6.60	£7.30	£10.90	On journeys using Service 851 both ways a special period return fare of £9.00 applies.				Merseyside			
		Premium:	£6.60	£7.30	£13.20								
		851	851	851	854					851	851	851	854
		D	D	D	D					D	D	D	D
Victoria Coach Stn.	dep.	1000	1400	1800	2330	Skelhorne Street	dep.	0900	1300	1700	2250		
Edge Lane	arr.	1420	1820	2220	0815	Edge Lane	dep.	0915	1315	1715	2235		
Skelhorne Street	arr.	1435	1835	2235	0800	Victoria Coach Stn.	arr.	1335	1735	2135	0710		

* See also "White Arrow Express" special offer.

- In 1980 British Coachways launched services that included Liverpool. Initially fares were £8.00 return. However, by the summer of 1981 return fares were £9.00. Two services were offered, though both required a change at Altrincham and journey times ranged from 4hrs 45 minutes to 5hrs 15 minutes;

Figure 9: British Coachways London/Liverpool information

The City Liner

SINGLE FARES

TO AND FROM LONDON		TO AND FROM BIRMINGHAM		
£	£	£	£	
2.90	—	—	—	BIRMINGHAM
4.90	2.90	—	—	LIVERPOOL
4.00	1.50	—	—	ALTRINCHAM
		—	—	MANCHESTER

RETURN FARES ARE DOUBLE SINGLE FARE

London · Birmingham · The North West

	Service Days	600 D	500 D	506 D	602 D	504 D
LONDON Kings Cross (Euston Road) Coach Terminus	0930	—	—	1330	1730	—
BIRMINGHAM 7/8 Park Street, Bull Ring	1145	—	—	—	—	—
ALTRINCHAM Shearings, Moss Lane Coach Station	1340	→1345	—	1730	2140	→2145
MANCHESTER Aytoun Street, opposite Solway House	1410	—	—	1800	2200	—
LIVERPOOL Mann Island, opposite Voss Garage	—	—	1430	—	—	2230

	Service Days	503 D	601 D	501 D	507 D	603 D
LIVERPOOL Mann Island, opposite Voss Garage	0745	—	—	—	1445	—
MANCHESTER Aytoun Street, opposite Solway House	—	0800	—	1200	—	1520
ALTRINCHAM Shearings, Moss Lane Coach Station	0830	→0830	—	1230	1530	→1530
BIRMINGHAM 7/8 Park Street, Bull Ring	—	—	—	1230	—	1745
LONDON Kings Cross (Euston Road) Coach Terminus	—	—	—	1830	—	2000

- The National Express response was to match deregulation day fares at £8.00 return but reduce direct services to two and operated one requiring a connection (showing how resources were moved to other network areas while maintaining a slight competitive edge). Journey times were 5hrs 45 minutes to 5hrs 55 minutes.

Figure 10: National Express post 1980 Act London/Liverpool leaflet

NATIONAL EXPRESS

MERSEYSIDE BIRMINGHAM LONDON

LIVERPOOL WIRRAL CHESTER - BIRMINGHAM **£2.00** SINGLE

LIVERPOOL WIRRAL CHESTER - LONDON **£4.00** SINGLE

Return fares are double the single fare. No reductions for children.

My new BEEPER services start Sunday, 30 November, 1980.

FOR TIMETABLE - SEE OVER

MERSEYSIDE - LONDON

You can book your tickets in advance at the fares shown on this leaflet

Service	Days	080	080	080	080
LIVERPOOL (Central Station)	0830	1130	1430	—	—
WIRRAL	0945	—	1445	—	—
WIRRAL	1015	—	1515	—	—
WIRRAL	1045	—	1545	—	—
LIVERPOOL	1100	1400	1700	—	—
BIRMINGHAM (Central Station)	1130	1430	1730	—	—
MANCHESTER (Piccadilly)	1200	1500	1800	—	—
LONDON (Victoria)	1415	1715	2015	—	—

Another example of aggressive fare competition was seen on the Manchester to London route. Here, British Coachways entered the market with return fares of £8.00 and three direct services each day taking around 4hrs 30 minutes (shown as part of the City Liner service above). National Express quickly defended its position with advertised fares cuts and more 'fast' journeys taking 4hrs 15 minutes.

Figure 11: National Express post 1980 Act London/Manchester information



Ultimately, National Express quickly matched all British Coachways' fares on each competing route (Townsin, 1992), and in doing so British Coachways appeared to have little further to offer the travelling public (Thomson and Whitfield, 1995), particularly as National Express were running equivalent or faster journey times and diverting resources from cross-country routes to trunk service frequency increases – a negative effect of the competition (Douglas, 1987 and Kilvington and Cross, 1986).

It the first year of deregulation British Coachways carried 750,000 passengers, compared to 12.5 million by National Express and an increase of 39% over the previous year (Townsin, 1992 and Douglas 1987). At the same time, National Express had also taken up to 5% of overall British Rail business (Birks, 1990), with a significantly higher proportion coming from the London to Oxford and West Country corridors where British Rail competed heavily with National Express and several other independent coach firms in addition to British Coachways.

At its peak, the British Coachways consortium had ten members, with a further four joining within a month of the network's launch; Yorks Travel, Barton Transport, Warners-Fairfax, and the Excelsior Group. These additions allowed an expanded route network with new services provided to Nottingham, Leicester, Northampton, Bristol, Southampton, Portsmouth, and Bournemouth. However, there were few service expansions beyond this point. Instead, several services were reduced in scope, merged, or cancelled. Even though Grey Green and Wallace Arnold quickly left the consortium it continued until 1983 when it finally ceased and left the market.

The main reasons for the failure of British Coachways can be summarised as:

- (a) The incumbent advantage of National Express as a brand and a network including its ticket sales agent network and ability to use its internal financial strength to subsidise fare cuts on isolated routes;
- (b) A lack of access to coach station facilities enjoyed by National Express, a situation not rectified until the 1985 Act, forcing the use of kerb-side stops with little information or recognition of the services provided;
- (c) Continual flux in services and the operators running them, and a lack of consistent brand application to vehicles to provide reassurance to new passengers;
- (d) The choice to compete solely on cost requiring operation at two pence per passenger mile and near full coaches from day one to break even at the fare levels set (Bateman and Woodliffe, 1984). Compare this to research for the London commuter market showing a requirement of closer to 4 pence per passenger mile for break-even costs at a 2/3 load factor and a 30-mile one-way trip with this increasing to 6 pence when the journey distance fell to 20-miles. (Dyer, Robbins, White, 1985);
- (e) The additional costs of dead mileage caused by one-way excess loads at peak times and the inefficient use of duplicates which ended up out of position with no other routes to run on to; and,
- (f) A lack of special fares for concessions or children coupled to a fare structure that ended up being too simplistic and at odds with more flexible systems used by National Express and British Rail.

3.7 Deregulation – other market developments

3.7.1 Competition quickly moved to co-operation

Following early phases of competition, the market quickly moved towards partnerships between National Express and independent operators, rather than new or revived competition. The example below shows the partnership between Yellowway and National Express between the North West and the South Coast. Other examples included the partnership with Trathens that created the Rapide level of service.

Figure 12: Example of National Express coordination with an independent



With partnerships being developed, echoing the form of network expansion seen in the post 1930 Act era by the likes of Royal Blue and Associated Motorways, there is evidence that the primary goals of the Act were not being realised as had been planned (numerous independent and own branded competition). However, it was evident that choice was increasing, and fares were falling, albeit mainly through the response to competition by the continued monopoly operator, National Express – this is evidence that contestability was influencing the market.

Where partnerships developed, it occurred with larger operators with which National Express already had good working relationships, often forged prior to deregulation – for example;

“Although there was a new spirit of competition, relations between NBC and most of the major independents which had run express services previously were not unfriendly and pooling arrangements with Wallace Arnold on Torbay services and Grey Green on routes in East Anglia continued [Starting with a Romford – Birmingham service and then expanding across the region]. Both Premier Travel and Yelloway, long-established partners with NBC subsidiaries, chose not to compete, while Whittle, after a period of direct competition [Whittle’s Goldhawk], entered a new agreement with NBC on services between the West Midlands and London” (Townsin, 1992, p24).

There are similarities here with the more recent liberalisation of the German market in terms of the speed of market contraction. However, in the German example co-operation in the medium term can be replaced with acquisition and expansion by one dominant firm once new entrants exited the market of their own accord (as many did in the UK) instead of any alliance arrangements. Regarding this newer market, the largest operator FlixBus acquired its main competitor to achieve 90% market share.

3.7.2 Innovations in service quality

Easing of intensive competition through the early 1980s began to reveal corridors where competition may be sustained for reasons beyond the traditional use of fares. Whilst National Express reached common operating agreements with some competitors, it had not been agile in the field of innovation outside of fares and schedule matching, to fend off competition – its main innovation had been the successful ‘beeper’ fares, changes to its stand-by fare policy, and trunk frequency enhancements (at the expense of some cross-country capacity).

What had initially escaped National Express’s attention was deregulation being a stimulus for wider innovation – something recognised in the 1960s by British Rail and an integral part of their inter-city rail strategy. Before the Act, coach travel had been a basic affair, suffering from years of underfunding following the demise of classical networks such as Royal Blue, and the ending of coach designs

stimulated by the external opportunities, such as Midland Red’s motorway coaches and Ribble’s ‘Gay Hostess’ double-deck vehicles. National Express, as part of the state-run NBC, had done little to raise the bar of coach travel in terms of quality and facilities since its inception in 1972 and British Coachways had used basic coaches and fares competition for their network making the passenger experience no different from pre-Act days. It was more progressive and entrepreneurial firms such as Trathens (West Country) and Cotters (Anglo-Scottish) that caught the headlines. These firms, and others, saw a gap in the market to apply their unique private hire market and customer centric skills to provide choice within the market. As such they used a combination of appropriate fares and improved passenger facilities to compete.

Through these developments it could be seen that innovation was particularly relevant to longer distance services where passengers might logically expect higher quality as competition based on frequency was nullified by the distances involved. While coach could not compete with rail in terms of speed, it could aim to match or better the standards seen in first-class and offer these luxuries at fares lower than a standard class rail ticket – the trade-off being time. Figure 13 summarises competing modes in 1982 for the West Country corridor from Baily (1982) and Dean (1983) – at this point Trathens and National Express were co-operating on services, an arrangement starting in 1981 after an earlier twelve-month period of direct competition.

Figure 13: Comparison by mode for the London/Plymouth corridor in 1981

Operator / mode	O/D pair	Time	Fare
Brymon / Air	Plymouth to London	1.00 hrs	£31.00
British Rail / Rail		3.75 hrs	£21.00
Trathens / Coach		4.00 hrs	£7.00

Trathens, with their London to Plymouth route used advanced European-built coaches, featuring ‘at seat’ hostess service, toilets, and video facilities. This level of service was hitherto unheard of in the market since the days of the Ribble’s Gay Hostess and carved out an immediate and popular niche for the independent operator.

Trathens were not alone in their discovery of the advantages of capacity increases. They, along with Stagecoach, two of the more successful operators in the market, introduced double deck coaches to the market and saw immediate growth alongside cost efficiencies; regarding the use of these coaches;

“Operators such as Trathens and Stagecoach were quick to see that a coach carrying 77 passengers was a cost-effective way of competing with established National Express services.” (Brown, 1989, p37).

Other independent firms also saw the advantage of providing higher quality vehicles (though often single-deck) with greater reliability, comfort, and aesthetic appeal such as Whittle’s Goldhawk service between the West Midlands and London. The competition provided to National Express by Whittle’s seeing a partnership develop, before eventual absorption of the service into the National Express network – something also seen between with Trathens.

Following sustained competition from firms using differentiated and 'up-market' products, National Express consolidated the leading innovations in a new product - launching 'Rapide' in 1982. This new product was largely a result of lessons learnt from Trathens' West Country service; where innovation and product differentiation, two economic tools allowed by the Act, were used to carve a niche in the long-distance market between Devon and London. Following a period of intense competition between Plymouth and London an agreement was reached to co-ordinate services in 1981. The Trathens' SkyLiner services were operated jointly for a short time before being absorbed fully into the National Express network and the luxury service format retained as 'Rapide'. This was a new sub-brand of the traditional National Express network that did not necessarily attract higher fares as all seats were part of the service (not a section of the vehicle). Indeed, higher fares may have left the market open to new 'no-frills' competition (something already used by Stagecoach with Magicbus services against SBG and Cotters between Glasgow and London). Rapide was quickly rolled out across the National Express network - the popular innovation offering first-class rail standards and significant passenger comfort improvements over long distances. National Express now competed a more equal footing with inter-city rail, and most Rapide services also used London as their anchor point. Their success saw 20% of all services being Rapide by 1985.

3.7.3 The British Rail response

British Rail, nationalised from 1947, already operated a trunk network of high-speed diesel and electric inter-city routes across the UK at the point of express coach deregulation – the first diesel high speed trains (HSTs) operating as the branded 'InterCity 125' network from 1976 between London and the West before being progressively rolled out on other city to city pairs and high-volume corridors.

With a high-speed network in place that also offered two tiers of travel and on-board catering facilities British Rail offered more than National Express in terms of service delivery at the point of deregulation. This network had been a long time in the planning, taking nearly 20-years to design, develop and implement. However, the initial impact of deregulation in rail was brought by independents such as Glennline, Trathens, and Cotters amongst others that attracted significant market share away from rail as service delivery was matched with lower fares, attracting the time rich passenger groups to coach. For example, nearly 40% of Glennline's and 47% of Len Wright's passengers came from rail (Kent, 1984) and on the Cotter's Anglo-Scot service 55% were abstracted from rail (Wilson, 1982) – these figures higher than abstraction levels from National Express (and SBG services for Anglo-Scot).

The initial deregulation response from British Rail focused on fare reductions on volume markets. This was in response to revenue losses to coach of £12m in 1981 and £15m in 1982 and 30% of 'new' coach passengers stating that they would have made the journey by train (Bleasdale, 1983) and therefore representing a loss in journeys to coach. The first response was group save tickets. Rail targeted leisure and time rich passenger groups onto trains with saver cards that provided up to 33% off the standard ticket price. This had some effect in stemming the flow of early losses but did not go far enough, prompting a second and more sustained response by British Rail. This focused on single saver tickets aimed at utilising spare off-peak capacity and were typically directed at journeys that originated in the provinces and terminated in London. The first application was on the London to Liverpool market, and in 1981 the 'Supersaver' offered return travel for £9.00, a reduction in 50% on standard fares, and prompted a 116% volume and 22% revenue growth (Kilvington and Cross, 1986).

Although concerns were addressed over the potential for pseudo state support for British Rail through the tax payer as a nationalised industry following its success on the Liverpool/London route the Supersaver fare was quickly rolled out across several corridors that were seeing intensive coach competition. Figures from Bleasdale (1983) suggest a strong recovery of lost volume and revenue with the fares arguably growing the market as well as competing with coach on these corridors by 1981 (in the face of otherwise significant overall losses as noted above for 1981 and 1982).

Regarding the express coach market, it can be observed that distance stimulated innovation in service standards and on-board facilities – delivered at lower fares than equivalent domestic air and first-class rail travel these provided a stronger competition than anticipated by rail on corridors such as Devon/London and the Anglo-Scot corridor, before fare wars between the modes began fully in 1981.

While concerns over state funded activities may be raised with respect to British Rail, it should also be noted that the ability of the dominant coach operator, National Express (nationalised at deregulation) to match fares and sustain a fares war with both British Coachways and British Rail simultaneously highlights a potential flaw in the Act. The demise of several independent services was arguably a bi-product of the fierce competition between British Rail and National Express and as such arguably state supported.

Through contestability and the removal of regulatory ties the Act had enabled the market to ensure that production tended towards efficiency, resulting in a potential increase in social-welfare levels. However, this is an outcome contested by Douglas regarding the express coach market, instead concluding that while social welfare was at best maintained for coach passengers, that of rail passengers who saw little change to the network provided was increased due to the wider range of ticket products and some enhancements to journey speeds made in competitive response. However, one market where rail failed to respond, or retake initially lost market share was the London commuter market (from Essex and Kent). National Express did not compete with local operators, leaving NBC subsidiaries and local operators to compete with slow regional rail services with poor connections to emerging city areas such as Docklands

3.7.4 Niche market services

The fortunes of independent coach firms in the scheduled express market were mixed by the mid-1980s. National Express had maintained and, in some areas, grown its market share, and this was aided by innovations such as Rapide as well as strong competition with British Rail leaving smaller firms little room to enter the market or secure sustainable market entry (Thompson and Whitfield, 1995).

The collapse of the British Coachways network just two years after the Act came into effect ensured only piecemeal competition remained - this consisting of spin-off services by some of the former consortium members and continued operation of other niche services by stand-alone independents. In contrast there remained varied and sustained competition on the Anglo-Scottish corridor.

Around 23 routes operated by 14 independent firms remained in operation beyond the collapse of British Coachways in 1983 and three distinct service types had emerged to find a foothold in the market;

1. Services that did not compete on price, instead carving out a niche in the market for greater in-vehicle services and capitalising also on their trusted status locally. Of the 23 independent routes still running by 1983, eleven offered a differentiated product by 'in-service' quality and higher vehicle specification. These niche market services competed more effectively with National Express than British Coachways with the higher quality delivering higher loads (Hackett and White, 1981).
2. Airport services had expanded dramatically and were one market where a significant choice was offered by National Express and other independents. With many airports lacking good rail connections, the long-distance city to airport market had little inter-modal competition and won high market share by offering in many cases the first direct services to Heathrow, Gatwick, and Birmingham. For example, prior to the Act only 3% of air passengers used scheduled coaches from London Heathrow (Doganis, 1980) - only the Green Line network had a strong association with airports around the London area.

As such, the potential rewards from this new market prompted thirteen new services by independents at deregulation (Douglas, 1987). Although the British Airports Authority made access to London Heathrow difficult, causing delays to British Coachways and the Reading/London/Southend X1 service due to private road access, equal rights for all operators was finally granted and through the later 1980s and into the 1990s the airport authority actively supported land transport links and improvements.

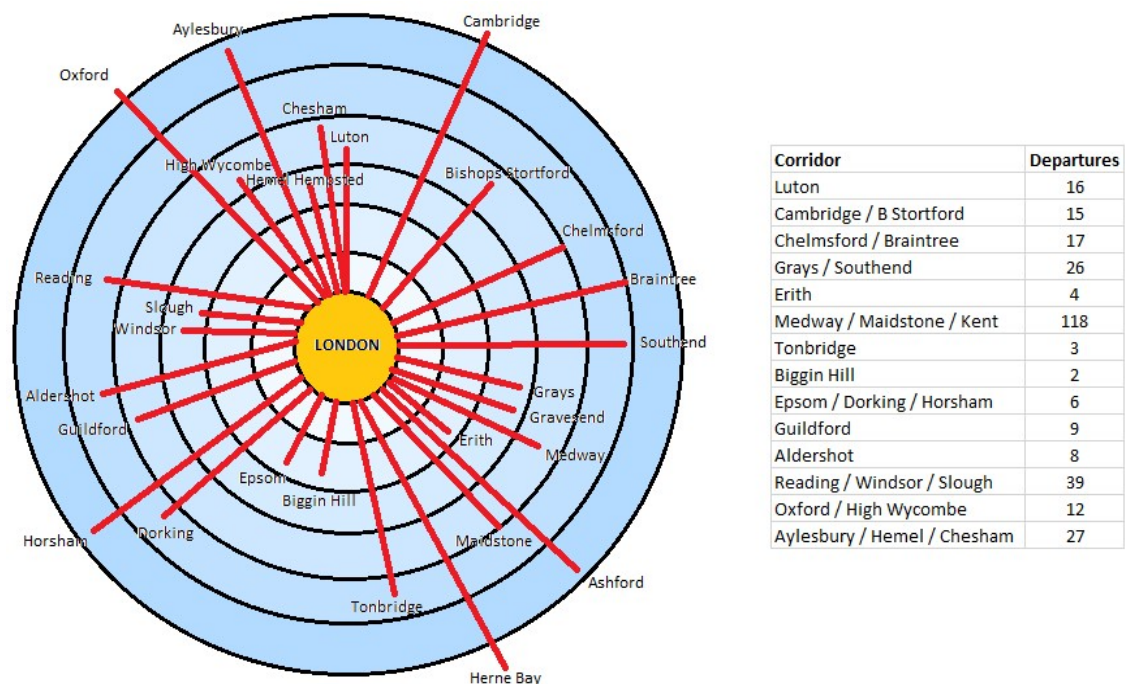
Before this change in direction, many services were withdrawn due to difficulties in promoting services to irregular air travellers (Douglas, 1987); the market, more effectively grown through diverting existing services, non-Rapide, through airports (Dean, 1983) and growing the market so that coach had captured 30% of the market from the West Midlands and Wales to Heathrow alone by 1984 (Astill and White, 1989).

Research in the 1980s by Astill and White proposed that critical thresholds for airport use were required to support the full range of feeder transport services, such as express coach. At the time London Stansted did not see sufficient use but today its growth in use supports competition between three operators across seven services to London as well as a host of regional links, making in an important network stop but not an interchange hub as London Heathrow has now become (Urry, 2011).

3. Some firms concentrated on short inter-urban links that were either commuter services to London or short regional city to city links. At deregulation these generally fell outside the scope of National Express, an example being Oxford to London where City of Oxford (NBC subsidiary) ran services prior to deregulation but saw competition from Thames Transit's 'Oxford Tube' (1987) after bus deregulation. The success by smaller coach firms in the commuter service category may be due to the gap between the deregulation of scheduled coach in 1980 and local bus in 1985 but is essentially a phenomenon unique the London catchment area.

The gap in legislation change, noted above in (3), left many links up to 65 miles operated by NBC subsidiaries and, as a result, more vulnerable to independent competition. This was because they were not part of a national network and drew their usage from the same catchment area as trusted independent firms. This was the same nationwide, but the high commuter flows into London and already high rail mode share created a perfect storm scenario for emergent coach competition with only a small amount of inter-modal shift required to make commuter services sustainable – not the case in other major UK cities (Dyer, Robbins, White, 1985). Figure 14 highlights the London market in the early 1980s showing the coach corridors by scheduled peak departures and 10-mile distance bands; the catchment area for London extends typically to 40 miles, but at its maximum is 65 miles.

Figure 14: London commuter catchment 1981 (Dyer, Robbins, White, 1985)



Even though growth was significant, the big bang to stimulate change did not come from the 1980 Act itself, but from the rail strikes of 1982 (a similar stimulant to the development of the first non-stop express services in the 1920s by Royal Blue) and real fare increases in regional rail fares, particularly those into London (Dyer, Robbins, White, 1985).

Growth and sustainability also depended on network development (such as that run by Olsens and latterly Grey-Green) and financial support to establish services through initial loss-making periods – something exhibited by NBC subsidiary and municipal operator services; such as Reading/London/Southend X1. (Dyer, Robbins, and White, 1985). Furthermore, for success by independent firms there needed to be inter-peak work available – this was plentiful in London with the year-round tourist market, but in other cities the same levels of work did not exist.

3.7.5 Further deregulation and privatisation

The 1985 Transport Act sought to mitigate some of the residual barriers experienced by independent market entrants to the market in 1980, such as terminal access. At the same time, this new Act set in motion the break-up of the NBC through privatisation. Many commentators expected this new injection of private ownership to spark renewed competition on long-distance routes in tandem with a revitalised local bus market. However, the Act caused many firms to leave the long-distance market to focus on the higher gains seen in local bus operation – for example Stagecoach.

In parallel to the local bus deregulation process, National Express had begun to consolidate its operations, ahead of the potential competition that might arise from further industry deregulation. Consolidation focused its network even more onto faster motorway links as competition with rail remained intense in the battle for off-peak leisure users who, being time rich, were attracted to the low fares that the coach now offered, and the improved journey times and on-board services offered between principal destinations on Rapide services. However, very few cross-country services were developed, due in part to the continued activities of NBC subsidiaries before and after local bus deregulation.

This differing approach to trunk and cross-country networks had two effects; (1) there was an opportunity to develop new shorter-range services where none existed such as commuter services, and; (2) it allowed independent and NBC subsidiary activity in this market, preserving long-standing limited stop services such as Premier's Cambridge to London service and those between Cardiff and Swansea, as well as NBC's Oxford to London services operated by South

Midland. However, the 1985 Act had further ramifications for the express coach market. Not only were NBC local bus subsidiaries gradually privatised, but National Express itself was privatised in the first wave of major sell-offs.

By 1988 National Express had been the subject of a management employee buy-out (MEBO). This MEBO, and the changing nature of local subsidiaries, now opened the market for independent firms to operate contracted services under the National Express brand. This broke the significant relationship that hitherto had been in place with NBC subsidiaries to supply the network and stimulated market entry and potential quality increases without seeing on-road competition. Privatisation therefore saw the National Express business model move away from vertical integration with the business tapping into the private market to find lower delivery costs in what was still a contestable market. This change in business model had two effects; (1) it sought to remove and prevent direct on-road competition with National Express services by independent operators who instead would compete for single services or combined service diagrams offered to the market by National Express on a cost per mile basis (revenue retained by National Express), and; (2) through this competition, National Express brought in independent expertise and quality while achieving competitive operating prices on a cost per mile basis.

The results of this approach, stimulated by the 1985 Act, was increased competition for work, and efficient cost and resource allocation for National Express. Independent firms become part of the national network through direct contractual relationships with this diminishing the threat of competition from small and medium sized firms. In creating an open market place for their contracts, National Express themselves created a contestable market which had the potential to be close to perfect in nature with operators of all sizes free to enter and exit. Of note are sharp fare rises in the late 1980s following the MEBO (White 2001), which due to the high short-run price elasticity of the market failed to increase total revenue for National Express. This also saw a lack of entry by other firms which in theory should have made good profits at the same or lower fares. This was in contradiction to the assumptions of the deregulation approach (contestability) but inactivity was due to the low revenue yield level, remaining high sunk costs, and intense rail competition.

The deregulation of the domestic inter-city coach market in the UK was a valid and worthy attempt to enliven an otherwise declining market. Setting out clear policy aims and creating a contestable environment for free-market activity it is demonstrable that all policy aims were met in part or in full across the early years of deregulation. Competition stimulated advances in the product, entrepreneurs aimed to segment the market, and physical technology advanced quickly. However, the main benefits to deregulation were seen on the core corridor network where journey times and fares fell in addition to frequencies increasing. This was important as the market remained highly price-elastic in the short-run meaning that passengers were highly susceptible to changes in price. While there is plenty of evidence for market entry using a range of strategies, there is also evidence to suggest that the dominance of National Express prior to and beyond deregulation coupled with residual market entry barriers did affect the long-term sustainability of market entry for new firms. Indeed, much new entry was conducted in the off-peak coaching season where firms trialled services using otherwise redundant resources that were then quickly withdrawn and re-allocated following competitive action by the dominant firm and the start of the following year's touring coach activities. Most success was found when the product was differentiated between firms - here new entrants sustained entry for longer periods than those who entered the market with parallel products to National Express and who competed solely on price. The 'network effect' has also been evidenced as important to support long-term sustainability, in-particular its impact of efficient vehicle allocation across a range of routes and its ability to ensure both directions attract viable passenger loads. While by the end of the 1980s the market had settled to a macro level dominant firm oligopoly (and a micro level monopoly on many corridors), the Act has seen a general up-turn in coach use, a significant increase in service standards, greater choice in destinations served and lower fares that remained in check through the decade not least because of the competitive threat created by the contestable market environment.

Chapter 4 – Medium and long-term effects of the Act

4.1 Overview

Following deregulation and the short-term period of direct competition the market settled back to a non-coercive monopoly. However, changes in the market structure from that point onwards have more often been prompted by exogenous factors in the absence of any further regulatory or legislative change. Technology has been one such factor, significant in facilitating new entry, removing residual barriers to market entry, and attracting new passengers. It has been this factor that has redefined the market to its current traditional oligopoly structure with two large firms competing for passengers.

The business model used by National Express following privatisation in the late 1980s created a private monopsony market in an otherwise non-coercive monopoly market structure through the 1990s. This approach helped to protect National Express from new competition, with small to medium sized firms preferring the lower risk option to serve the dominant operators – being part of the network and not competing with it.

Whilst National Express's business model had allowed it to remain the dominant supplier in the market through the 1990s the situation changed in 2003 when Stagecoach entered the market with its low-cost, 'no-frills' Megabus operation. Learning lessons from the airline industry and using yield management, Megabus entered the market as a loss-leader with three-years financial support given by its parent company to secure sustainable market share. Use of technology to raise awareness and remove the need to use traditional 'ticket agents' combined with substantial financial support has enabled sustained market entry and expansion to new markets, endorsing post-deregulation research that market entry requires financial strength, network approach, and product differentiation. This was not exhibited by the failed entry of First (Greyhound) in the late 2000s but has been seen in Germany and France by current dominant operators in those markets.

Applying technology to the processes of passenger interaction, capacity management and price setting has seen costly overheads removed from the market and raised the potential for low-cost market entry. Use of technology in this way following the emergence of Megabus saw National Express and independents quickly react with similar systems to keep pace. Operating with an internet only booking policy, Megabus tapped into technology savvy passenger groups and enticed travellers with minimum fares of £1, winning market share and creating a platform for innovation.

While competition between inter-city coach and rail continues alongside that of trunk corridor competition between National Express and Megabus there has been little, if any, further entry into the long-distance market by smaller firms save for some niche market operations such as New Bharat serving the Asian community. However, the airport sector has contradicted this. Firms such as EasyBus, Terravision, Stansted CityLink, Oxford CityLink, Greenline, and Airport Bus Express have all challenged National Express on the regional airport/London market, forcing changes in the supply of airport coach capacity and some exits after fare and frequency responses by National Express.

Market structure has evolved from 1990 to the present day. An imperfectly competitive structure gave way to dominant firm oligopoly (late 1980s) and then again to non-coercive monopoly (1990s). However, the entry of Megabus has moved the market back to a situation between these states at a macro level. However, on isolated corridors (Oxford and the West Country) and distinct markets (airport services) micro level differences in structure are evident and range from duopolies through to imperfectly competitive markets.

Most recently technology has stimulated potential change in the market. 'Virtual' operators, like Sn-ap. are using digital technology to create a demand-led inter-city network. Using crowd-sourcing and journey matching technology (similar to Uber), to create routes, third party contractors drawn from the smaller sized firm pool then run services. This new entry may make the buyer a price maker and has potential to move the market towards imperfect, or even perfect, competition if early ventures weather competition.

4.2 Deregulation – the 1990s

By the 1990s the market structure had moved to a position of non-coercive monopoly following a decade of movement from controlled monopoly, imperfect competition, and dominant firm oligopoly. In this new decade National Express remained dominant across the UK and lived side-by-side with small pockets of sustained but non-harmful independent competition. This small market of medium to long-distance daily services being separate from additional London commuter and airport services that were also in operation at the same time. In the long-distance market, a competitive equilibrium was being maintained - contestability remained but was felt by all firms within the market (e.g. Primrose Motor's service seeing new entry competition from another Herefordshire independent, Yeoman's Canyon, before being forced to leave the market - the latter then being absorbed into the National Express network - becoming a third-party operator).

Figure 15: UK Long-distance independent operators at 1989/90

Operator	Route	Started	Ended	Duration
National Express	Network / 70% share	1972	ongoing	ongoing
Armstrong Galley	North-East / London	1984	1992	c8-years
Bakers Dolphin	West Country / London	1983	2013	c20-years
Bere Regis / Bluebird	Dorset / London	1984	2007	c12 years
Berry's Superfast	West Country / London	1983	ongoing	ongoing
City of Oxford / Go-Ahead	Oxford / London	1972	ongoing	ongoing
Elsley's Coaches / TransLinc	Lincolnshire / London	1980	2007	c27-years
Excelsior Coaches	Bournemouth / London	1988	1998	c10-years
Hoggs Coaches / Brylaine	Lincolnshire / London	1980	2001	c21-years
Len Wright / Skyliner Int'l	Manchester / London	1982	1989	c7-years
London Liner (LT/ WMPTE)	Birmingham / London	1986	1995	c9-years
Primrose Motors	Herefordshire / London	1983	1997	c14-years
Silver Choice / First Group	Scotland / London	1980	2012	c32-years
Swanbrook	Cheltenham / London	1980	ongoing*	ongoing*
Thames Transit**	Oxford / London	1987	ongoing	ongoing
Whippet Coaches	Cambridge / London	1980	2003	c23-years
Yeoman's Canyon	Hereford / London	1991	1994	c3-years

Note: * - now truncated to serve only Cheltenham to Oxford. ** - now part of the Stagecoach Group and operated as The Oxford Tube.

In the 1989/90 period the market consisted of at least 16 firms providing competition to the dominant market supplier, National Express (this reduced to

15 from 1990). Ten of these entrants had commenced services in 1982/83 or later – a period in which initial fierce competition had subsided and arguably allowed these new entrants to find gaps and niche opportunities - leading to longer sustainability for most entrants. Through the 1990s the market was operating as a non-coercive monopoly structure, observing the following conditions:

- A dominant supplier in the market makes price and production decisions;
- There is an upper limit to pricing - if breached profits may erode (the inter-city coach market is highly price-elastic, limiting total revenue despite an upper limit, and profitability depends on costs as below);
- Excessive pricing or too lower quality will see new competition enter the market;
- If price and quality remain acceptable, the market is an efficient monopoly;
- Production costs cannot be met by new entry in an efficient monopoly;
- The dominant firm can charge a lower price and still be profitable, and;
- Competition is possible but seldom occurs as few can enter at low cost.

This market structure is demonstrated by activities in this medium-term period. While settled, the passenger market remained cost conscious. Substantial fare increases by National Express in the early 1990s lead to a negative reaction by passengers and a pegging back of journey totals to deregulation levels (circa 10m) by 1993.

While passengers quickly moved away from National Express in this period, this move towards potentially excessive profit making did not stimulate new market entry as would be expected under contestable market conditions. Instead, due to the high short-run price elasticity of the market, normal profits remained even with higher fares, therefore failing to alert potential entrants to the opportunities available. A review of fares after the flotation of the FTSE 200 Index as a public

limited company (plc) saw fare cuts revive passenger numbers to their former state by 2002 as National Express became even more profit and dividend focused.

The non-coercive monopoly structure also explains why fare increases did not stimulate competition. Although National Express pushed prices (fares) above an acceptable ceiling for passengers, on-road production costs were still low preventing new market entry as other firms could not match or reduce production costs. Additionally, internal competition for National Express work through its private monopsony market stopped these firms (who had the likely capacity to becoming innovators) from entering the market as own-branded operations. Competition instead entered the market with alternative modes (rail and air) and passengers moved to these or did not travel.

At this time smaller firms found entry and operation easier in the deregulated bus market. This allowed cheaper vehicles and similar crew resources to be used more efficiently. Though lower speeds than express coach saw fewer seat miles per vehicle-hour operated, the higher load factors and the ease of attracting ridership made this market a better proposition with success also due to continued long-distance rail competition and the monopsony market that National Express had created with its business model.

The late 1990s saw the market maintain a settled and contestable structure. National Express operated several brand identities seeking to segment markets - linking fares to service attributes. Brands were: National Express (core network), Rapide (up-market long-distance services), FlightLink (long-distance airport), SpeedLink and JetLink (short-range airport services), and Express Shuttle (high frequency inter-urban links with a 100-mile range).

The medium and long-term periods in Scotland have contrasted slightly to that of England and Wales with mergers and acquisitions heavily shaping the landscape. Scottish CityLink, formed in 1985 and operated to the same monopsony style business model as National Express following its privatisation, was itself the subject of a MEBO in 1990. The network remained intact, but contracts operated by independents grew quickly, aided by the wider privatisation of the Scottish bus

market. Some former SBG subsidiaries were acquired by Stagecoach who quickly launched new inter-urban express services in competition with CityLink, relinquishing CityLink contracts in many cases. CityLink was then purchased by National Express in 1993 seeing all Anglo-Scottish services fall under the UK branding and CityLink forming the domestic network. The market structure was like the UK, a dominant firm oligopoly with some limited independent activity remaining across Scotland. National Express was forced to divest itself of the domestic network when it won the rail franchise for ScotRail upon privatisation, selling CityLink to the Comfort DelGro Group in 1998.

Through the 1990s two important sub-markets remained strong. Airport services were one of the notable successes of the Act and continued to operate to high frequencies with London airports the focus for this activity. National Express was dominant in this market segmenting the market into brands and competing on the Cambridge corridor until an amalgamation with Cambridge Coach Services occurred. London commuter services were also popular. They represented a low-cost alternative to rail which was still heavily congested and expensive. The success of coach services in Kent saw a mixed level approach with higher priced The Kings Ferry services operating against lower cost services provided by Travel Rite, North Kent Express and The King's Ferry's own low-cost brand, The London Link, until the end of the 1990s. At the same time First Group (as Thamesway) were operating on the south Essex corridor to Southend every 30 minutes and competing with Green Line coach services and the municipal operator as well as local rail – this situation occurring for several years. Today this coaching corridor has almost completely disappeared - being served only once a day by National Express.

With the market across the UK in a period of stability, two processes were occurring at a low-level, one an unintentional bi-product of the free market created by deregulation, and the other in stark contrast – delivering what the Government had intended but only in very small quantities:

- Firstly, although started in the 1980s as a reaction to competition seen on some core corridors, increased rationalisation of the network (removing intermediate points) occurred through the 1990s as continued market

freedoms shaped the market further. This concentrated resources to areas where profit levels could be maximised (a result of plc creation), often with demand being higher than existing supply in relation to resources used and where rail posed the greatest level of competition over long distances such that this active competition may dissuade any new market entry. While deregulation brought lower fares, higher frequencies, and improved quality, Douglas (1987) challenges the theory that free markets create greater social welfare, asking instead if a 'net reduction' in social welfare, was caused by the 1980 Act whose end results after an early competitive phase were the reallocation of resources and a largely single supplier scenario. In respect of this point, Kilvington and Cross (1980) and Cole (1998) note that most competition and improvement to service was to be found on city to city routes, and that whilst trunk, city to city services were greatly improved in terms of frequency, quality and pricing structure (providing a net benefit) the wide ranging 'retrenchment' of National Express's resources had left many settlements, those between 20,000 and 100,000 people, to be 'adversely affected' with lower service frequencies and fewer links on the secondary (cross-country) network. Therefore, in this way the aims of the Government to create choice through competition had given way to a situation in which inter-modal competition was determining the shape of the network, removing travel options where costs to serve these locations outweighed economic gain (even given the 'network effect') and new entrants failed to materialise with coach/rail competition keeping fares in check within a price elastic market; and,

- Secondly, some corridors were not a non-coercive monopoly, instead operating to policy intentions. This was due to continuing independent activity being sustained in isolated areas. One example was the West Country corridor which at deregulation was an oligopoly, with various coach firms and rail being suppliers to the large number of buyers. An oligopoly allows product differentiation, and in the short-term period, both Trathens and British Coachways demonstrated this together with National Express and Glennline. While some operators exited early, the oligopolistic nature of the market, distances involved, cost differentials between modes, and product variation all combined for more sustained

success by a host of companies. In the medium-term due to further mergers and an improved rail product the competitive corridor shrunk to focus on the M4 which continued to represent an oligopoly with National Express competing with Berry's (Superfast), Bakers-Dolphin, and rail services. Additionally, the Oxford-London corridor continues to be an example of a very strong duopoly (close to a Chamberlin duopoly) – a situation preventing National Express entering the market and seeing the two firms in the market operate, providing choice and innovation away of the dominant UK provider.

4.3 Deregulation – 2000 to 2010

By 2000 the market for express coach travel across England and Wales was stable. In Scotland however, examples of cross-country competition persisted into 2000. Although owned by Comfort DelGro from 1998, CityLink, the dominant firm, competed with independents such as Parks of Hamilton and West Coast Motors. However, in the early 2000s some independents began to jointly operate services (e.g. West Coast Motors) or run franchised diagrams (e.g. Parks of Hamilton) with CityLink in addition to their own services and a period of stability followed and save for some localised activity, competition was restricted to regional rail. However, on the Anglo-Scot market National Express was dominant - competing with Silver Choice (an independent overnight service), rail and air.

Long-distance competition in England and Wales was confined to the West Country corridor and, only early in the 2000s, the south coast and east coast:

- Bakers Dolphin (West Country to London) – ceased 2013;
- Bere Regis (Dorset to London) – ceased c2007 (as Bluebird Coaches);
- Berry's Superfast (West Country to London) – still in operation; and,
- Elsey's (Lincolnshire to London) – ceased in 2007 (as TransLinc).

The most significant competition to the National Express network remained on the West Country corridor where two significant competing services provided very different issues for National Express with their strong home markets and continued use of in-service refreshments and luxury feel – a significant

differentiation given National Express's decision to drop this level of service across the network. Both competitors also made good use of kerb-side stops and one, Berry's, uses Hammersmith as the London terminus to make journey times faster and more reliable.

Additional to these longer distance markets a short-range corridor continued to thrive, not only following deregulation and through the 1990s, but also through the 2000s and to the present day. The Oxford/London corridor has always been fertile coach territory. Having seen significant competition with up to eighteen service providers ahead of the 1930 Act, the market, although reduced to two providers for over 80 years as continued to operate under intense competition. The Oxford/London market is the most intense commercial coach corridor in Europe and operates as a duopoly between Oxford Tube (Stagecoach) and the X90 (Go-Ahead Group). Services compete intensely 24-hours a day, in contrast to the heavily peaked commuter networks operated between London and Kent. At their height, the combined services provide a headway of every 8 minutes between London and Oxford and upwards of 375 seats per hour. With both companies being part of much larger international transport groups, the rate of service innovation and expansion is impressive and includes free WiFi, higher capacity coaches and increased passenger legroom.

Their combined activities leave little or no room for new market entry, due to this innovation and frequency, and fare levels - with some trips being offered at rates as low as £1 single on the Oxford Tube.

Competition between the Oxford operators has also expanded to the airport market where both have periodically competed between Oxford, Heathrow, and Gatwick, though currently only one (Go-Ahead) serves the airports. In a wider sense the lucrative airport market discovered through the 1980 Act still grows. National Express runs numerous services to all the London airports and competes with Green Line (Luton) and Airport Bus Express (Stansted), as well as guaranteeing a proportion of seats for EasyBus passengers (this firm formerly competed with all other operators using mini-van style vehicles but found market entry at this level unsustainable due to fierce competition and too smaller vehicles).

From 2000 to 2010 sub-markets have had contrasting fortunes. The airport market (above) has seen a substantive increase in competitive activity on some corridors. In a bid to simplify its competitive product and ensure a singular network National Express rationalised to a single brand in 2000, removing branded airport services and only distinguishing them by route number prefixes. This helped to protect the long-distance to/from airport market and little to no competition on such services to Heathrow and Gatwick was seen across the decade. This, however, contrasted with very heavy competition for passengers between London and the regional 'low-cost airline' airports, such as Luton and Stansted.

The commuter coach market, however, has sat juxtaposed to the airport market although remaining between imperfect competition and oligopoly through the 2000s. During this period The Kings Ferry (TKF) dominated in North Kent with competition from several firms falling away. However, some remained (e.g. Chalkwell (now withdrawn) and Redwing), even after acquisition of TKF by National Express (2007). Such was the brand recognition of TKF that National Express retained this, instead seeking new market gains through product and fares innovation that competed with rail.

4.4 Megabus, technology and beyond 2010

In 2003, new competition emerged from Stagecoach - branded Megabus. Its business model replicated that of the 'low-cost, no-frills' airlines (Southwest Airlines (USA) and EasyJet (UK)), using internet only booking and real-time management of capacity and fares (yield management). The market was also seeing continued competition from the rail network - fully privatised since 1997 and seeing aggressive moves by new train operating companies (TOCs) to maintain and increase market share inherited from British Rail.

One innovation that helped the 'new' rail market present a significant benefit to existing and potential passengers was the simplification of journey planning and ticket purchase, brought about by 'thetrainline.com' – a Virgin Trains initiative launched in 1999 (Fisher and Walton, 2001). This provided a single use web portal for the planning and booking of tickets between two locations which may

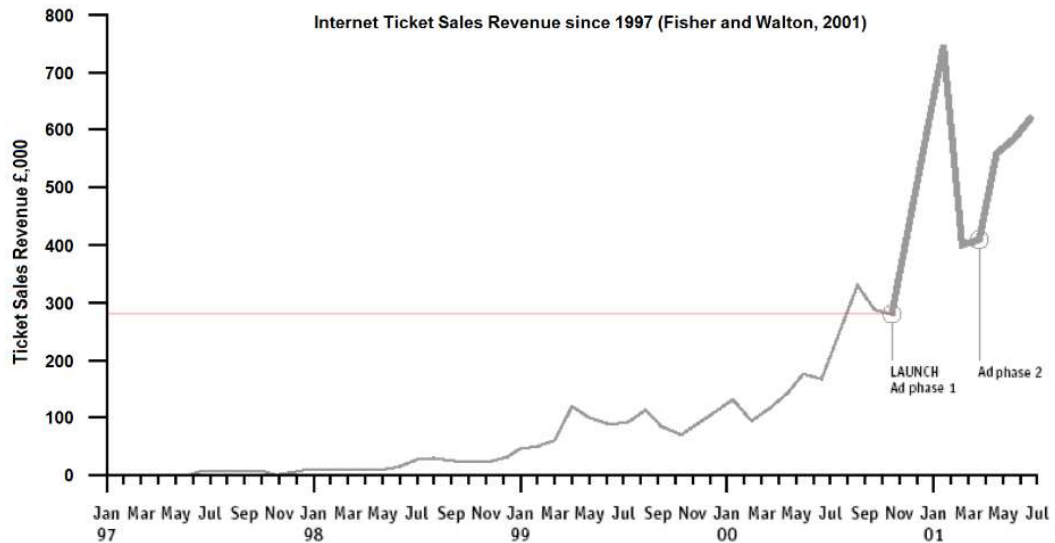
span more than one TOC. The portal offered comparisons on ticket prices and journey times, showed routes with and without connections, and allowed on-line payment for tickets as well as collection at any station.

National Express had been using a basic website since 1995, providing simple journey planning and fares information. This also allowed real-time ticket sales though this was not widely used at the time with traditional ticket sales channels (on-street, station ticket agents and telesales) preferred by passengers. With increased rail competition and a rapidly moving 'dot.com' market a need was identified by National Express in 2000 to react to competition, which would (Fisher and Walton, 2001):

- compete with increasingly sophisticated dot.com travel sites;
- targeted the 'tech-savvy' and increasingly mobile internet population;
- create a website that would become a core 'direct sales' channel;
- generate new sales and reduce costs of commission based channels;
- create a web site that would encapsulate and represent all sub-brands;
- compete with the trainline.com.

GobyCoach.com was the result - launched in late 2000 at a fraction of the cost of thetrainline.com it provided an updated sales channel required to compete in the market. GobyCoach.com generated sales revenue over £0.5m after just ten-months; reduced costs lost to commission (5% of each ticket) for on-street agents by £241,000; saw 195,000 bookings made; saw average on-line ticket sale prices of £26.00; registered 23.3m 'hits' (120 hits per booking), and; saw internet ticket sales more than double the launch figure by the peak in winter operation. Figure 16 shows its impact in terms of being a channel for internet sales and is tracked against the former website offering.

Figure 16: National Express internet ticket sales revenue from 1997-2001



This new channel and significant growth helped National Express to compete effectively with the TOCs and prepared it for new competition. By 2003 the use of GobyCoach.com for ticket sales had seen a year on year increase of 50% and in the same year Megabus, a Stagecoach innovation and re-entry into a market vacated in 1989, launched. The business model was based on internet only ticket sales, removing costly ticket offices and telesales teams, and using ‘no-frills’ vehicles with kerb-side stops to achieve low-cost fares. Developments in e-commerce technology enabled market entry but the parent group also provided three-years financial support - allowing early losses to establish market share – differing from deregulation day approaches.

Using yield management techniques and forcing competitors to use the same approaches, Megabus re-ignited the market place, creating competition on key corridors with real-time changes to each operator’s fare product and closely matched departure times. The market structure also changed; National Express once the dominant firm in a non-coercive monopoly (and most corridors an efficient monopoly) became one of two firms on each main city pairing – market entry being possible through Megabus’ use of e-commerce to lower fixed cost overheads and exploit a condition of a non-coercive monopoly - ‘low production costs’ - something not being achieved by National Express and therefore opening the possibility for new entry. Competition was not representative of a duopoly as each firm did not match the quantity supplied by the other firm, as a result, the market moved back to a dominant firm oligopoly. At the time National Express

still maintained the higher share, over 50%, and influenced prices, albeit often as a reaction to Megabus. Through the 2000s, and beyond 2010, increasing competition from Megabus and expansion into new markets such as the west of England and major airports such as Heathrow, Gatwick and Manchester have seen the market structure move further towards a straight forward oligopoly state.

Megabus initially focused on key north-south and east-west routes, using London and Birmingham hubs and launching with old vehicles akin to Anglo-Scot routes at deregulation and its Magicbus response to competition in 1989 between London and Glasgow. Using its widespread UK bus operations as the source of maintenance, stabling, and driver resources it quickly established a skeletal network linking Cornwall, central England, the north, and Scotland. Competition was focused on fares, similar to British Coachways in the early 1980s, but has increasingly switched to capacity in recent years. In response to the Megabus' initially low fares in 2003 and '50p online booking fee' National Express launched internet only 'fun-fares' – these were sold at very low cost but had significant restrictions on use, were not refundable or transferable and targeted specific services and journeys where National Express was seeing significant competition or had the available seat capacity.

Megabus not only entered the long-distance market in England. In 2004 it competed heavily on the domestic Scottish network with CityLink. High competitive attrition focused on fares and matched service levels using the Megabus and Motorvator (Edinburgh/Glasgow) brands caused a joint venture to be agreed in Scotland between CityLink (Comfort DelGro) and Stagecoach (parent company of Megabus and Motorvator). This consolidated the network at a stroke, moved the market to a near monopoly, and saw fares on some corridors rise. However, following a competition commission enquiry (Competition Commission, 2006) Stagecoach was forced to divest some CityLink routes. Park's of Hamilton, a founder member of British Coachways, took on these services, albeit branded as CityLink and part of a co-ordinated network. Domestically, the market has now settled to a predominant duopoly structure. Megabus competes on all main city pairings with the CityLink network which retains its contracting business model and sees a mix of Stagecoach, Parks and

Comfort DelGro operated services run alongside contracted route run by notable independents (such as West Coast Motors).

A significant contributing factor to Megabus' success was the original business plan. Stagecoach Group provided financial support for the operation over the first three years, effectively allowing losses to be made to secure a long-term foothold in the market. Megabus was a typical 'loss-leader' business in this respect – significantly different from all other market entry attempts seen since 1980. Using this approach, the Megabus network reached a point of break-even during 2007 and profit thereafter - consistent with the planned outcome by the parent company (Robbins and White, 2012).

Following profitability and a secured market position Stagecoach has invested significantly in fleet renewal and further network expansion. The operation has grown strategically, increasing market share and quickly gaining a reputation for innovation. It was the first inter-city operator to use 15m coaches on its network following relaxation of laws regarding maximum vehicle lengths and pioneered overnight sleeper travel on Anglo-Scot services using articulated coaches.

Its latest operations model has seen a move to a centralised vehicle and staffing operation from Rugby with far less dependence on outstations and in contrast to National Express' continued third-party model. This has created a denser network focus which is operated with very limited outsourcing of services (London/Norwich, Birmingham/Norwich) and additional capacity from third party operators such as Hamilton's where required. However, in 2017 a unique partnership was formed with South Gloucestershire Bus and Coach (SGBC) following their hand-back of National Express diagrams. A co-ordination agreement with Stagecoach was struck to run services in the West of England against National Express using Megabus branding but with SGBC taking revenue risk. This expansion brought Megabus into the airport market for the first time, stimulating it to divert own-operated services from cities in Scotland and the North of England to Manchester Airport. Significant competitive retaliation from National Express in terms of fares and service levels has now seen the SGBC services withdrawn (summer of 2018) and the South Wales/London Airports route run in-house by Stagecoach Megabus.

The Anglo-Scottish market has been continued to see competition between National Express and Megabus. Between 2013 and 2017 Megabus introduced the Gold network offering a step-change in on-board customer service and facilities. This looked to segment the market using differing levels of quality between Megabus products. Gold overnight sleeper services used uniquely developed (fully flatbed) coaches and following initial high interest the financial case for the services failed and Gold was discontinued. However, competition remains significant with both operators rationalising services to invest in higher core frequencies and larger vehicles.

In contrast to Megabus' success during the same period was First Group. Through their ownership and operation of the iconic Greyhound network in the USA, First Group attempted to introduce the brand to the UK in 2009 with the intention of securing its own share of the inter-city travel market. The first services focused on the south coast, hitherto untapped by Megabus despite Stagecoach's large local bus presence in the area. Greyhound provided London/Southampton and London/Portsmouth services, with rapid expansion including London/Isle of Wight (connecting with Red Funnel ferries). All coaches included WiFi and increased legroom, the latter a differential from National Express and Megabus but putting financial strain on revenue with fewer seats available for sale. For the first time in the market, social media was used extensively for real-time information and 'flash' travel offers.

Although initial success was seen, further expansion only occurred on a piecemeal basis. The overnight Anglo-Scottish service to London, acquired by First on the take-over of Silver Choice Coaches was 'converted' to Greyhound as was the short distance service between Cardiff and Swansea. These later expansions did not, however, constitute a cohesive network and were moreover an approach to quickly rejuvenate existing, tired services and brands. This was a critical mistake, as the development of a network with hub locations had already been shown as a requirement to ensure a significant share of the market. With contestability allowing quick reaction to new entry, the existing firms reacted to the competition by improving frequencies and lowering fares on comparable routes in the weeks before Greyhound launched. As a result, strong competition on the south coast from National Express, and on Scottish the corridor by all

modes saw these services cease by 2012. Prior to its cessation, decentralisation to regional subsidiaries for daily operation, the opposite to the approach seen at Megabus, failed to see the operation react favourably to the competition, with Greyhound finally ceasing as a continuing market entry attempt in 2015 - though the brand remained in use on the Cardiff to Swansea service for a few months prior to this service being re-branded once more by First Group.

While market entry across the long-distance UK network has had mixed fortunes the markets for regional airport and short-range commuter services have seen some growth. Due to significant demand for travel and competition for passengers some regional airports have tendered terminal capacity to operators, creating a competitive environment in which to guarantee long-term prime market positions – this has forced innovation, reliability, and high frequency services but has contained competition, potentially dampening the welfare benefits that competition could bring.

While the commuter coach market has remained competitive around parts of London, attempts to replicate the model elsewhere have largely failed, even with financial support such as Avonmouth/Bristol. However, competition remains between North Kent and London though the recent acquisition of Clarkes, an operator of Kent commuter services and significant tourist work in London by National Express, has consolidated the market. Notwithstanding this, notable independents such as Redwing, Centaur Travel, Buzz-Lines and Brookline, provide services - mixing commuter and inter-peak tourist work to sustain the routes. However, Chalkwell, a long-standing commuter coach operator has recently left the market citing falling passenger numbers and rising costs. Enough competition remains though to ensure the market is between oligopoly and imperfect competition at the micro level. Outside of Kent limited commuter services are operated (such as Leighton Buzzard/London by Marshalls) and only a small Green Line network remains. In contrast to Kent, the Essex (Southend/London) market has all but ceased following improvements to rail service conditions and now Southend and London are only connected once daily by National Express.

4.4 Overall financial performance of National Express

Between 2000 and 2017 National Express, although challenged strongly by rail, Megabus (from 2003) and minor market incursions, has remained the firm in the free-market for inter-city coach services with the largest market share. Figure 17 below tracks the profitability and passenger data for National Express from 1999 to 2017, bringing up to date information from Robbins and White (2011) using information sourced from the firm's annual reports;

Figure 17: National Express Profits and Passengers 1999-2017

Financial Year (end)	Passengers (million)	Turnover (£ million)	Turnover at 2017 prices*	Operating profit (£m)	Operating margin %
1999	19	168.2	276.2	11.0	6.5
2000	22	186.8	298.0	11.2	6.0
2001	17	181.3	287.2	10.6	5.8
2002	17	184.5	283.9	12.2	6.6
2003	17	186.4	279.0	15.9	8.5
2004	18	195.6	282.9	19.3	9.9
2005	No figure available	200.5	283.8	21.5	10.7
2006	19	207.3	280.9	23.7	11.4
2007	19	231.0	300.9	23.1	10.0
2008	22	244.7	315.7	27.0	11.0
2009	21	242.9	306.1	34.3	14.1
2010	17	250.3	301.0	32.0	12.8
2011	17	259.1	297.3	34.9	13.5
2012	17	255.1	283.9	20.6	8.1**
2013	18	263.5	285.7	24.5	9.3
2014	19	275.2	293.6	28.0	10.2
2015	19	281.2	296.4	32.3	11.5
2016	20	282.8	290.8	33.3	11.8
2017	20	287.8***	287.8	34.2	11.9

Source - figures 1999-2009 Robbins and White (2011), figures 2010-2017 National Express PLC Annual Reports. All information is for National Express only and includes long and short-range services (inc hotel hoppa) – with up to 33% of all figures and being airport coach links.

* Adjusted using RPI Factor.

** Drop in margin due to the withdrawal of concessionary income from free travel for over 60s, removed from non-local bus services in 2011 (National Express, 2012)

*** 3% drop over expected revenue due to terrorism in 2017 and effects to travel and tourism. Revenue Management System rolled out in 2017 and driving up coach occupancy by 5.5%. It helped revenue growth by 2% and offset a -3% decline in revenue due to terrorism.

The data above shows the largely static totals for passenger journeys across the period, with an overall change of only 5%, though National Express' (Coach) profit as tripled and its operating margin doubled over the same period. Revenue has increased by 71% but at 2017 prices this difference reduces to 4% across the period. Overall low growth masks a significant rise in the market for airport services, up to 33% of National Express' business, and the substantive gains on

key corridors such as South Coast, Bristol and South Wales to/from London. In terms of deregulation success and market health analysis of the data suggests efficiencies have been found by National Express in response to competition. While overall passenger numbers have remained stable, these efficiencies have seen increased choice in journey times, a geographic network maintained with core corridors seeing most resource, and low fares. The latter point is explained by the low level, in real-terms, of the change in turn-over and demonstrates that the firm is remaining within normal profit levels. These results are symptomatic of all firms in the market and as such contestability is in evidence. All firms are leanly operating close to capacity, cognisant of potential competition and not at levels which would see current competition erode each firms' market share. New entry by 'virtual' operators such as Sn-ap may impact further on this position with margins likely to reduce in response to further competitive action.

Chapter 5 – Liberalisation case study: Sweden

5.1 Overview

Sweden has a population density of 23.1 people per square kilometre over a land mass of circa 450,000 square kilometres. Population growth levels are largely static and there is an aging population. The country is rural in nature and heavily forested with most economic and residential activity focused on the south and east in the capital, Stockholm, the west coast at Gothenburg, and to the south near Helsingborg and Malmö, both close to the Danish capital of Copenhagen.

The rail network across Sweden is more expansive than that of Norway (see Chapter 6) with 12,821km of track, of which 1,152km is double track and 67% electrified (Spaven, 1993). The system provides lines from the south to the north of the country with all major cities connected by regional rail services. In the south, a network of high speed (200km/hr) lines connect the principal cities of Malmö, Helsingborg, Gothenburg, Östersund, Sundsvall, and Uppsala with Stockholm.

There is a history of successive levels of fragmentation and decentralisation across Sweden's public transport sector. Prior to 1988, the rail network across Sweden - Statens Järnvägar (SJ) was operated wholly by the state. However, with rising operational costs, low levels of use, and reported deficits linked to infrastructure and maintenance costs the Swedish government broke-up SJ Rail, separating infrastructure and operations in 1988 (Spaven, 1993). This process was the originator of mandated EU directives that required the same vertical separation in each member state through EU Directive 91/440 - stimulating UK privatisation and Norwegian re-structuring. While there were commonalities with the privatisation approach used in the UK, the Swedish model took a far greater interest in maintaining social, economic, and environmental welfare - ensuring that privatisation was kept closely within the confines of local government control and co-ordination of public transport (Spaven, 1993).

The process opened train operations to market forces through competitive tendering and the privatisation of the local rail network. The process took thirteen

years and has seen the gradual dismantling of SJ into separate businesses resulting in a mixed landscape of state and private companies. The state still owns and maintains infrastructure while local passenger services are competitively tendered where commercial operation is not possible; a mix of private rail companies operate these and the state SJ operates the largest share.

Of the remaining modes in Sweden, domestic air services were fully liberalised in 1992, followed a year later by a partial liberalisation of the express coach industry in 1993 (Jansson et al, 1997). The driver for change, as with rail above, was the ability to create competition, move cost and risk to the private sector, and increase social welfare through greater choice, lower fares, and innovation.

Being fully deregulated, the express coach market has represented a viable and competitive alternative mode for some years in Sweden, particularly in areas where rail is limited. While domestic air is the quickest mode, it is the most expensive. Rail travel is slower and cheaper than air with average fare costs per kilometre between 0.1 and 0.15 Euros, but still twice that of long-distance coach which typically sees fares closer to 0.05 or 0.06 Euros per kilometre (Andersson, 2001).

5.2 The market before liberalisation

Prior to deregulation long distance coach services across Sweden were limited, unlike the UK. Considered harmful to the state operated rail network, attempts to enter the market were nearly all blocked by SJ. However, to complement the rail network SJ ran some coach services, creating a 'network effect' for rail (Alexandersson, 2009). The definition of a long-distance coach service in Sweden remains that of a service operating over 100km in length and crossing at least one county border and aligned in form with inter-regional rail. Use of services that were provided just prior to deregulation totalled 170m passenger km in 1992. During the same period, rail journeys were recorded at 5,351m passenger km and domestic air as 2,879m passenger km. Therefore, the coach share was 2% of all passenger km operated (Jansson et al, 1997).

Sweden employed a two-stage process for the deregulation of express coach services. The first stage of deregulation took place in 1993, at the same time as competitive tendering for tracks and all non-profitable inter-regional rail lines began. This stage focused on reversing the burden of proof from coach (having to prove any services was of no detriment to the rail network) to rail (SJ needing to prove that the planned coach service would affect the viability of existing rail) (Jansson et al, 1997).

This first stage saw early gains in passengers and revenue for express coach services - seeing an increase in the supply of coach service km of 39% by 1996 (Jansson et al, 1997). Coach firms, who no longer had to prove they would not damage rail services, saw increases in passengers and revenues from time-rich passengers whereas rail saw a passenger loss (Van de Velde, 2009). This modal shift took place due to lower fares and increased competition with inter-regional rail services and between the large numbers of new coach services that had commenced (Nordenlöv and Alexandersson, 1999). Seeing the potential for market expansion as deregulation made progressive steps to being fully realised, a notable UK commercial operator, Stagecoach, bought Swebus AB from the Swedish State Railway (SJ) in 1996.

This operation comprised routes across Scandinavia and created a potential spring board for the company to expand further in bus, coach, and rail. However, failure to secure new contracts and the limited scope of the acquired routes in Norway and Denmark led Stagecoach to quickly sell operations outside of Sweden, itself quickly branded into Stagecoach Swebus in 1997 using the same livery as applied to its UK operations. This also coincided with a significant marketing and fares promotion campaign seeing rapid growth in passengers largely at the expense of regional rail.

The market structure ahead of deregulation can be observed as a state controlled monopoly. This gave way during the first stage of deregulation to an imperfectly competitive market which moved quickly to a dominant firm oligopoly where Swebus was the largest operator in the market but still with barriers linked to rail holding some control over routes and market supply.

5.3 The market since liberalisation

Sweden is now a completely deregulated market (Van de Velde, 2009). Taking place over a six-year period and in parallel with elements of rail privatisation, full deregulation, the second stage in the process, took place in 1999. This coincided with capacity improvements on Sweden's regional and inter-regional railways, four years after the launch of high speed services. This has synergies with the UK experience where deregulation coincided with roll-out of InterCity rail services, originally launched in 1976, but applied to core routes between 1978 and 1980.

The Swedish Transport Policy Bill enabling full deregulation of inter-city coach services was tabled in 1998 following studies showing abstraction from private cars rather than rail services was more likely – similar to study results seen in Norway. In the period of partial deregulation some proposed long-distance coach services had been objected to by appeals to the government from SJ but full deregulation saw an end to the ability for rail to contest routes and instead allowed free competition (Nordenlöv and Alexandersson, 1999). This stepped process was not seen in the UK, instead full competition with rail from occurred from 1980.

The effects of full deregulation in terms of new entry and incumbent expansion was not as high as initially thought (Nordenlöv and Alexandersson, 1999). Following its entry into the market in 1996, Stagecoach had expanded significantly, challenging earlier decisions to block new services in 1993 and in many cases overturning decisions to realise its originally planned network. By 1999 Swebus Express had expanded considerably but only a few further market entrants followed, stimulated by the success of Stagecoach's challenge to formerly blocked routes by SJ. This meant Swebus Express controlled around 50% of a passenger market, which nationally had seen a doubling of km operated between 1996 and 1998 and coinciding with Stagecoach's acquisition of Swebus from SJ. The remaining 50% was populated by expanded services from existing operators and some new entrants who focused on single routes, either providing new public transport alignments or competing with other road and rail operators, (Nordenlöv and Alexandersson, 1999).

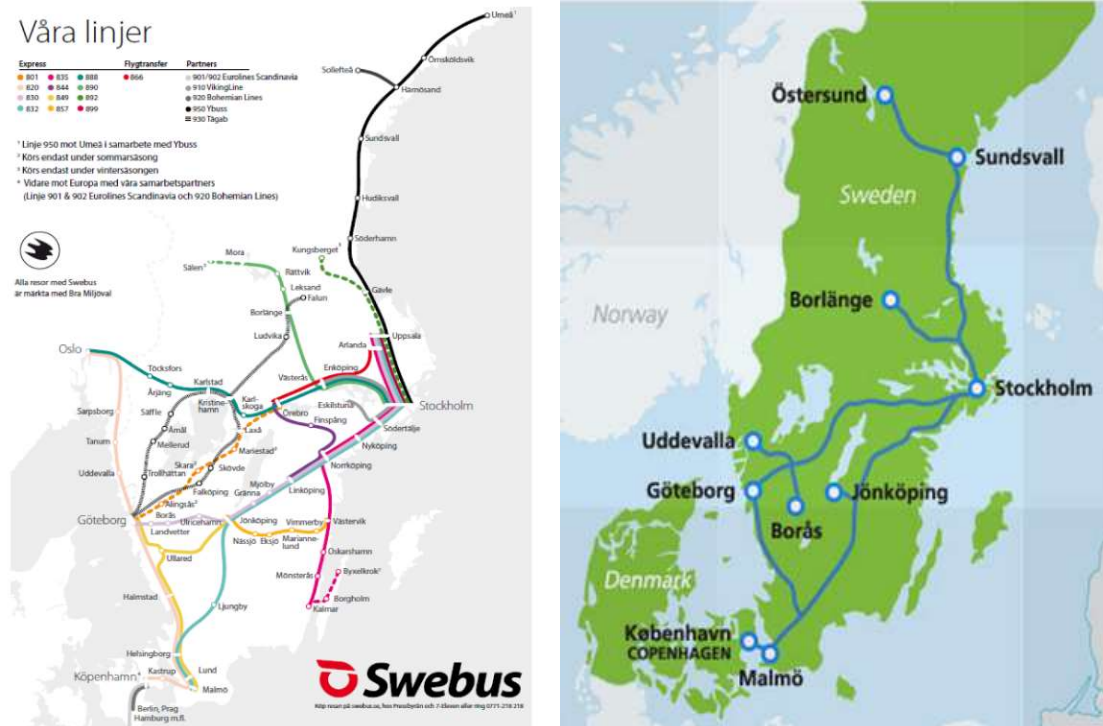
In 2000, Stagecoach sold Swebus Express to Concordia Bus, jointly owned by Schoyen Gruppen (47%), Bus Holdings Sarl (51%) and the management team (2%). With ownership of Swebus changing hands further expansion, a change in brand, and a new company structure followed under Concordia Bus. Further developments in ownership continued through the early 2000s with the operation moving to Nobina Sverige AB (a Norwegian firm trading as Swebus) in 2009. In the same period passenger journeys stood at 3.6m (2007) rising to 3.8m by 2009 with the mode share of passenger kilometres for express coach at 6% nearly double that of 1996 (3.3%) and three times the share prior to deregulation in 1992 (2%) (Jansson et al, 1997).

During the same period use of rail services increased from 1993 - a time when all non-profitable lines were subject to competitive tendering for open access competition and state monopoly was broken. Growth was due to increased regional investment in passenger services, greater efficiency generated through competition, and new market entrants leading to innovations in pricing (Alexandersson and Hultén, 2008). Growth continued through the final break-up of state rail holdings and in the period 2007 to 2012, passenger journeys increased by c25%. However, even with growth the cost of rail remains an issue in its success; the development of the high-speed network from 1990 (with trains used more intensely from 1995 onwards) was costly to the nation and the introduction of wider bodied train sets from 2000 have helped operating companies to lower the costs of rail travel for the end user but have represented a considerable capital investment.

By 2009, the coach market was split between three operators; Swebus (50% of km), Svenska Buss, and Nettbuss (Safflebuss and Bus4you) (29% km combined); the remaining market consisted of some 25 smaller operators and 90% of all services were operated commercially providing a proxy to the UK market though little use of coach services for distances over 600km (373 miles) was made (Van de Velde, 2009) contrasting to the UK where corridors over this distance saw considerable growth and competition. Today's network sees Swebus remain the dominant firm, offering several services with partner operators (SDG, 2016), reminiscent of joint operations in the early 1980s between National Express and large independents such as Trathens and Yelloway, and a

focus on airport connections, again like the UK. The operators of airport express coach services are; Flybussarna (Transdev), Ybuss (partners Swebus), and Airshuttle (a new start-up connecting Stockholm to Arlanda Airport and competing directly with the Arlanda Express rail service). Figure 18 compares the current Swebus and high-speed rail networks. There are broad similarities; express coach being more expansive and competing with high-speed and regional rail.

Figure 18: Current inter-city coach and high-speed rail maps for Sweden



Travel times are important for passengers. Figure 18 shows two routes where coach to rail competition is intensive; Stockholm / Gothenburg and Stockholm / Malmö and Figure 19 summarises the mode times and costs.

Figure 19: Journey time and cost comparisons for the Swedish market

Journey	Option 1 time	Option 2 time	Option 3 time	Option 1 cost	Option 2 cost	Option 3 cost
Stockholm to Gothenburg	SJ (rail) 3.5 hrs	MTR (rail) 3.5 hrs	Swebus 7.0 hrs	SJ (rail) 445-735 SEK	MTR (rail) 420-520 SEK	Swebus 239-339 SEK
Stockholm to Malmö	SJ (rail) 4.5 hrs	Swebus 9.0 hrs	FlixBus 8.0 hrs	SJ (rail) 475-625 SEK	Swebus 519 max SEK	FlixBus 115 max SEK

Each corridor sees considerable price and time-based competition between and within modes – a healthy bi-product of a successfully deregulated environment which has met original aims to maximise social, economic, and environmental welfare. In the current market, on-road coach competition is maintained on the core corridors, similar in style to competition in the UK between National Express and Megabus. Several routes in Sweden, particularly those radiating from Stockholm see competition from multiple operators – growing the market (SDG, 2016) and like the Oxford/London and West Country/London corridors in the UK.

5.4 Sweden Summary

Sweden was the first major liberalisation of express coach activities, occurring some 19 years after the UK. The process followed liberalisation of the domestic air market. Of note was the parallel rail privatisation process and entry into the market of a notable UK bus group. In comparison to the 1980 Act, the following points are useful:

- Like the UK, Sweden has a well-developed high-speed network operating between all major cities and paralleling road routes across Sweden, particularly in the more densely populated southern region;
- However, the regional rail system is slow and more expensive than coach travel. With journey time differences small on some corridors express coach has found a significant market for services, replicating experiences in Germany and France;
- Prior to liberalisation, coach services in Sweden were limited due to heavy levels of protection given to the rail network. However, SJ did operate some coach services where no other transport existed, similar to Germany;
- The two-stage approach allowed coach to compete with state operated rail and saw relief from protectionism though rail was still able to block some network expansions. The rail network was less dynamic with low investment and capacity combined with uncompetitive fares – this helped the coach market grow as unlike the UK the rail network had no mandate to compete;

- The six-year period to full rail privatisation saw coach grow, the network only contracting when full privatisation of rail added capacity, drove pricing innovation, and the high-speed rail network fully launched with further added capacity; and,
- The network has settled to three commercial operators. There is considerable joint working and fares remain competitive. Around 25 small and medium sized operators run c20% of the network with airport services an important niche market.

Chapter 6 – Liberalisation case study: Norway

6.1 Overview

Norway has a low population density of 15.5 people per square kilometre over a land mass of circa 385,000 square kilometres. Population growth levels are largely static and there is an aging population. The country is heavily rural with most economic and residential activity focused in the southern capital Oslo as well as Bergen, Stavanger, Kristiansand, and Drammen.

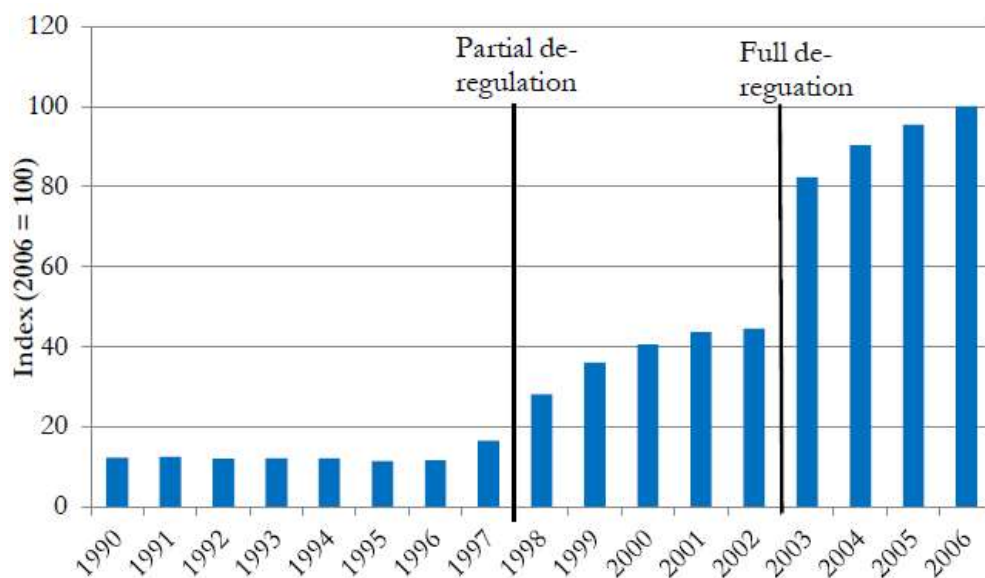
Domestic air services are an important part of the public transport network and focus on domestic services between the north and south of the country, often providing the only mode. Routes between the capital and Bergen, Stavanger, and Trondheim are some of the busiest domestic routes in Europe. While these routes are busy and the market is well developed air, as a mode, still sees a lower share than rail and coach.

Current rail infrastructure, comprising c4,100 kilometres of rail track is limited to a low-speed network of mainly single-track lines. Only 6% is of double track configuration and within this only 26% is high-speed (the line from Oslo to the international airport). The limitation of rail infrastructure, with a focus of resources to the south, may be one reason for the sustainability of express coach operation - itself limited in scope by the low resident population densities in many parts of the country.

After rail, the next principal public mode of long and medium distance travel is express coach. Norway has had a well-functioning deregulated coach market from 2003 (Van de Velde, 2009). The process began in the early 1990s, a time where considerable restrictions to market entry were creating a bias towards regional subsidisation and a focus on rail industry protection at a county level. By the late 1990s a 'de facto deregulated market' trialled the removal of some of the 'evidence of proof' activities otherwise required by operators when setting up services if they considered wider benefits to passengers (Leiren and Fearnley, 2008).

This was successful and saw moves to formal deregulation by 2003 where market entry conditions were widely abolished, and emphasis switched to the accommodation of long-distance coach services by each county into their regulated local bus market. Figure 20 from Aarhaug (2012) shows passenger use of express coach services in the three stages of market structure change; early 1990s with heavy restrictions and rail protection, late 1990s a move to make market entry easier, realising passenger benefits of choice, and 2003 - the effects of full-scale competition with development of competing networks, fares, and service innovations.

Figure 20: Express coach passenger use by deregulation stage - Norway



6.2 The market before liberalisation

Local transport and long-distance road services were organised at the Norwegian county level - a county being an area representing political and local government authority within Norway, akin to the UK's local government structure. Operating public transport in this way presented significant problems for passengers travelling longer distances across the country by road as in Norway (unlike the UK) the county boundaries signified a requirement to change services due to the funding and subsidisation structure used and combined with the area (county) based licensing process. This created interchange penalties to passengers, long waiting times, and more complex levels of travel information.

Rail was state controlled, and unlike systems in neighbouring countries was lagging in terms of infrastructure investment causing stagnation in passenger use between 1995 and 2007, the last four years of this hastened by deregulation of the coach market. Structurally, the rail system has seen a much slower movement towards decentralised operation and a more competitive market structure. Vertical separation of the operating structure (between infrastructure and train operations) occurred in 1996; eight years after the same process in neighbouring Sweden, but only two years after UK privatisation – this being triggered by EU Directive 91/440. Vertical separation meant train operations would have more opportunity to innovate and be separated further through privatisation over the coming years.

For coach operation a licensing structure was in place until the late 1990s. Operators either held an area, or an individual route licence (Leiren and Fearnley, 2008), the latter akin to RSLs seen in the UK prior to 1980. These licenses were authorised by the county but were often initiated by the operator who saw a need for the service being promoted (Van de Velde, 2009), and prior to deregulation, could successfully argue its case regarding abstraction from the rail network. Licenses were issued on an exclusive basis, and whereas the UK system focused on quantity restriction to remove competition, the Norwegian approach owed a lot to the different funding landscape used for all public transport. In contrast to the UK, long-distance transport in Norway formed part of the county level subsidised network with rules for subsidy precluding the promotion of activity that was deemed wasteful of public funding – for example competition between operators across the same route. This meant services operated within tight controls and the system gave protection to local bus and rail, the latter built to traverse county boundaries and provide the long-distance domestic public transport network.

Prior to deregulation, the coach network had two functions; firstly, cross county travel between main towns and county boundaries, and secondly, as a feeder to rail-heads where rail travel continued to the capital city, Oslo. The pre-1998 model of operation in Norway caused a fragmented network with many local operators evident across the country but confined to licensed operation of public services within their home county. This compares to the UK situation of fewer express

coach operators, limited to market entry by the RSL system, but able to operate outside of their 'home traffic area'. In economic structure terms, the market was controlled through state mechanisms and each route was a monopoly and, as with the UK market, a controlled monopoly was observed alongside a vibrant market of operators who concentrated on the contract and private hire sector which had no boundaries to operation.

With licenses restricting the growth and efficient shape of the network the controlled structure forced innovation, as it had done in the UK, through the use of coach pools. Co-operation between firms was used in Norway to reshape the network and overcome enforced inefficiencies created by county boundaries and ring-fenced subsidies. Operators co-operated to establish longer through services as an amalgamation of common lines of route formerly supplied by each operator in their respective county (Leiren and Fearnley, 2008). To mitigate against the issues caused by county subsidy restrictions, each operator ran these extensions commercially in the county, or counties, outside of their home county operation. This co-operation was mutually beneficial as;

“The Public Transport Administration got more service for the same amount of subsidy, the bus companies increased their income [by offering a better service network and attracting passengers], and the passengers received better services” (Leiren and Fearnley, 2008, p3).

As in the UK, barriers to this level of innovation prevailed. Firstly, the railway in Norway had rights of objection over co-operation between regional coach companies using arguments for passenger abstraction and wasteful 'competition' - as seen in the UK before 1980. A further issue complicated the allowance of licences to operate 'co-operated' through services; counties required satisfying that subsidies were not crossing country boundaries through creative accounting by each operator. To satisfy county administrators, new applicants needed to:

- prove the need for the service;
- prove the service would not abstract from existing public transport; and,
- prove there was no detraction in use of infrastructure investments (e.g. rail stations)

With many services being approved, the approach in using co-operative agreements to overcome licensing barriers began to shape the future of the deregulated market in Norway. The acceptance of co-operatives resulted in the development of NOR-WAY BUSSEKSPRESS during the 1990s; a co-operative initially comprising 40-member operators and acting as a marketing umbrella created to provide a single network (resonating with the success of the UK's National Express network). Services in Norway were provided through member operators running coaches in common colours and using common marketing and fares between destinations. However, the National Express business model uses private firms to operate the network on a contractual basis whereas in Norway firms were equal members of the co-operative with the operation being more like Associated Motorways and British Coachways of the deregulation period. Like these consortia, common hubs, connecting services and through fares are used with a background reconciliation process linking revenue payments proportionally to miles operated by each member firm.

Before beginning the legislative process to deregulate the express coach market in Norway, studies conducted in the early years of co-operative operation were designed to address concerns that allowing expansion of long-distance service networks would undermine the rail and domestic airline markets – something not required by the UK government ahead of the 1980 Act with, instead, a mandate given to British Rail to make InterCity services self-supporting. The studies concluded that the development of coach lines in parallel to rail and air routes across the country had complemented the overall public transport system, providing increased choice and overall market growth (Van de Velde, 2009 - from studies by Hjellnes COWI, 1999; Strand, 1991) and existing rail and air passengers remained loyal to these modes due to speed advantages over coach (Leiren and Fearnley, 2008). This contrasted with the UK where there was little evidence of abstraction from private car; most passengers being new to public transport (e.g. student and inbound tourism market) or 'time rich' rail passengers.

Later surveys prior to deregulation showed increasing competition between rail and coach in the late 1990s with evidence of higher abstraction than earlier shown. However, broad conclusions followed earlier surveys as far as abstraction. This was less important to rail as in volume terms a small shift away

from rail would meet coach capacity but would not undermine the viability of rail. In totality, the effects of modal shift were greater on the private car. Intense competition between rail and coach showed higher abstraction rates from car due to the greater level of choice in travel times, frequencies, and costs by mode.

6.3 The market since liberalisation

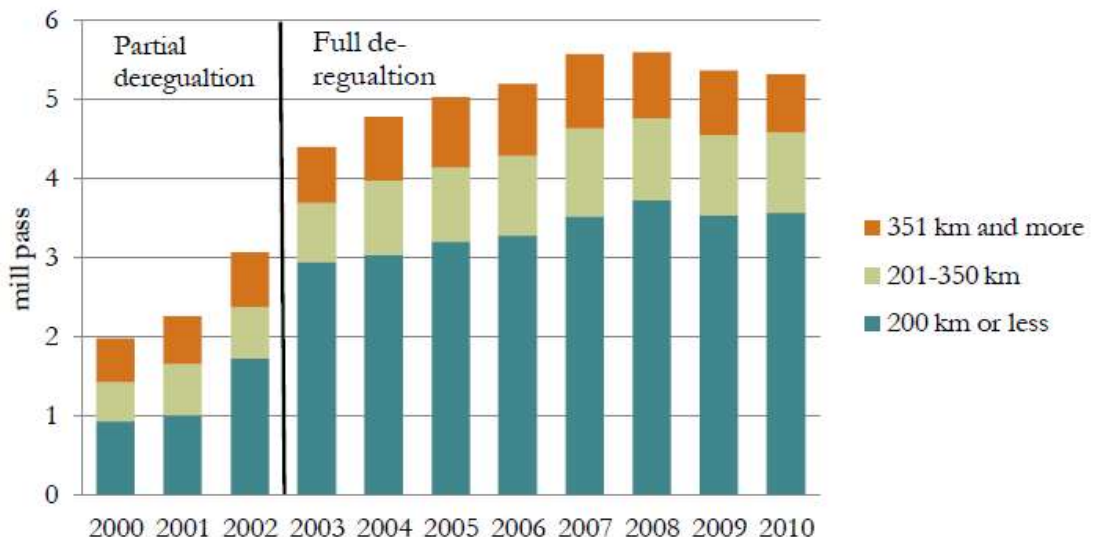
The market for express coach services was fully deregulated in 2003, making the Norwegian market juvenile in comparison to the UK, and seeing it continue to mature 14-years later. In the immediate seven-year period following deregulation the market for companies operating express coach lines consolidated from 30 to 17 operating firms, with only 5 major operator networks existing by 2006 (Leiren and Fearnley, 2008). This compares favourably with the UK experience over the same time span following deregulation where a 55% drop off rate can be observed, the higher figure explained by the more intensive competition from rail and a dominant incumbent working as a monopsony provider, a situation not replicated in the Norwegian market at deregulation as the equivalent single operator was a cooperative of independent firms who shared in the revenue returns of the network.

Many firms in 2003 were small, operating individual services or in joint ventures with other firms under the NOR-WAY BUSSEKSPRESS umbrella (Aarhaug, 2012). Through mergers and acquisitions the market continues to shrink, as has membership of NOR-WAY BUSSEKSPRESS, dropping from 40 prior to deregulation to 25 currently.

The market has demonstrated that survival is possible both within and outside of co-operatives. For example, Nettbuss are a member of NOR-WAY BUSSEKSPRESS but operate individual services in competition with the network as well as on corridors unserved by any other firm – this has parallels with the rise and consequent fall of British Coachways with companies such as Grey Green and Wallace Arnold operating in and out of the co-operative before eventually competing with it and is replicated today with some National Express third party contractors also operating in the inter-city coach market themselves (e.g. Go-Ahead Oxford).

The market has also settled regarding the type of express service operated and has attracted market entry through shorter distance services in a category known as hourly-express (Leiren and Fearnley, 2008). This was an invention of a main competitor TIMEkspressen just prior to full scale deregulation and since 2003 growth in this market has been considerable in relation to other long-distance service categories. Figure 21 from Aarhaug (2012) demonstrates this showing growth in passenger journeys by trip distance in Norway between 2000 and 2010. The substantive change and growth in volume was in the 200km (124 miles) or less market with smaller growth in services between 201km and 350km. By 2010 the 351km category was largely unchanged following growth and decline through the period.

Figure 21: Passenger journeys by trip distance 2000 to 2010 - Norway



This concentration on short distance connections contradicts the UK experience; at the point of deregulation in the UK 56% of new services operated at 200km or less with 25% (201-350km) and 19% (350km+) in the remaining two distance categories. After seven years of deregulation the number of services in total had fallen to 33, some dating back to deregulation while others being new entrants and 37% operated at 200km or less, 24% (201-350km), and 39% (350 km+). Whilst this is not a direct comparison to passenger journey volumes the suggestion here is there was a largely equal attraction to market entry and sustainability on long and short distance markets, the latter being buoyed significantly by the London commuter and airport markets.

Not only is the Norwegian market now fully deregulated, but it enjoys barrier free entry regarding objections to the issue of route licenses. Still dealt with at a county level, these are now issued freely if operators exhibit key standards on safety and operational control, and if they accept 'closed door' operation when these conditions are placed on the license to protect locally subsidised buses.

Today's Norwegian express coach network has evolved to see principally three main competitors emerge; NOR-WAY BUSSEKSPRESS, a co-operative of 25 operators running over 50 services under one brand and unified network; Nettbuss, owned by the Norwegian State Railway and providing long-distance services across Norway and into Sweden - complementing the domestic rail network; TIMEkspressen, who initiated shorter express coach services on distances up to 200km and focus on the denser southern residential market where there is more demand for this style of service - competing with rail even though the firm is now part of Nettbuss. Flybussen, who have developed services to and from cities and regional airports are a growing fourth operator. There is healthy market for these services, replicating the UK in this growing market.

Rail has provided more competition recently with passenger use increasing by 5% year on year from 2010 after organisational re-structure and significant investment in higher capacity trains. Plans to dismantle the state operated network are now underway with privatisation following, line by line (like the UK).

While entry to the coach market is barrier free, there is still a defining dynamic which shapes the structure. Subsidies from local counties remain and although now more limited, some services do have a level of subsidy which precludes competitive entry by other firms - thereby protecting the incumbent. Furthermore, the effect of consolidation and market power of the long-standing NOR-WAY BUSSEKSPRESS network and its more recent competitors has limited market entry by small and medium sized independents due to advantages of scale and co-operation on services - this limiting competition further as each operator takes a joint stake in a route rather than operate individually under full competition.

Finally, technologies have been slow to develop. Yield management is evident but used to a lesser extent by operators (Aarhaug, 2012). Only one firm is using this technique, Lavprisenekspressen, and their experience is showing a decline in the number of services operated as they appear to use the approach to manage existing demand more efficiently, instead of stimulating new growth. This is in stark contrast to experiences of this technology in the UK from the early 2000s and most recently across Germany and continental Europe.

6.4 Norway Summary

Occurring 23 years after the UK, there are some comparable results as well as notable differences that can be drawn between the two deregulated markets:

- Through a three-stage deregulation spanning 12-years a significant co-operative of firms emerged to overcome licensing barriers. By stage three this lowered the potential for widespread competition and moved the focus to rail competition;
- Growth and fall off in new market entrants and the volume of services and passengers is comparable to the UK. The market stagnated in the seven years following deregulation even though rail is less developed than the UK;
- Continued subsidy of local bus markets is having a negative effect on the growth and competition within the Norwegian coach market. This has created a barrier in the Norwegian market, though market maturity is now suppressing new entry;
- Co-operation in the Norwegian coach market continues to work well, ensuring a comprehensive coach network is operated – itself suppressing new competition; and,
- Low-cost fares are important but yield management techniques have failed to find a foothold. Instead, frequency has remained a core factor of coach use in the short distance market and product stability of the network in the long-distance market.

Chapter 7 – Liberalisation case study: Germany and France

7.1 Overview

The German inter-city coach market was liberalised in January 2013, with the French market following in 2015 after the 'Macron Law' came into effect. Since liberalisation the German market has moved quickly from a highly competitive position, close in structure terms to imperfect competition to a near monopoly state with the market at best described as a dominant firm oligopoly but becoming close to a non-coercive monopoly with FlixBus holding a near 90% market share. In France, the market quickly consolidated to a position of three operators through 2015/16 with Ouibus and FlixBus holding around 80% of the market between them (Blayac and Bougette, 2016).

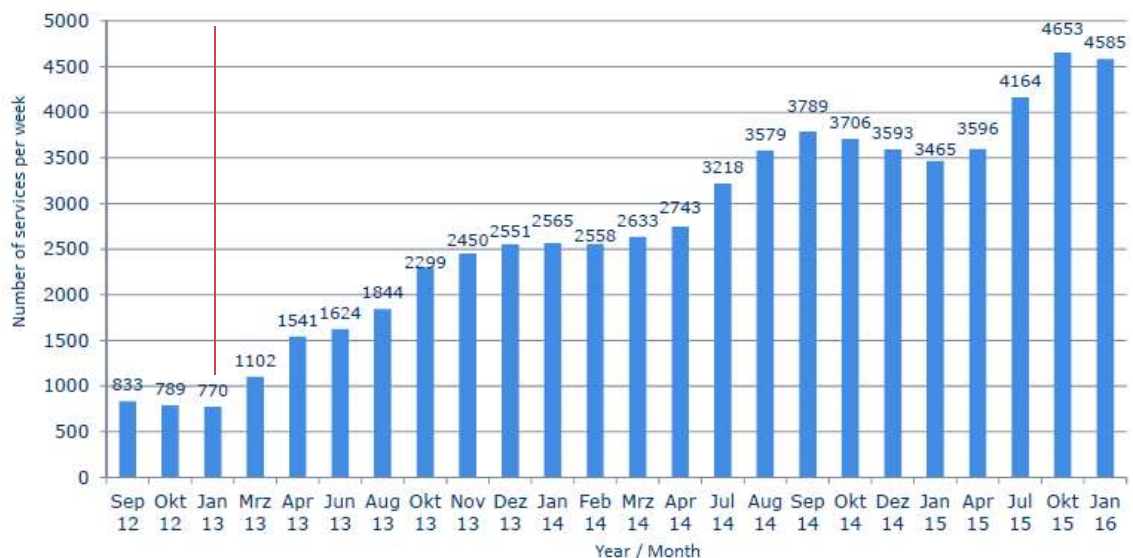
The market for coach travel in both countries remains buoyant. In Germany, following an intense period of competition between several coach operators and the domestic rail network (mainly state owned and operated) a single firm has emerged as the market leader following a mix of aggressive fare based competition and a series of acquisitions, mergers and market exits. In France, the state rail provider SNCF launched iDBus (now Ouibus) with this enjoying strong financial backing and shared ticketing with the rail network and the acquisition of a main competitor (Starshipper in 2016). Stagecoach (Megabus) provided a range of domestic services before their withdrawal in 2016 and sale of the business to FlixBus, and in France Isilines remains present and is partially state owned.

A large passenger base in both countries is drawn from the student market segment, with up to 90% of passengers being students in the German market (PTV / STRATA, 2012) and many operators continuing to look to tailor their services to this group using kerb-side stops and university campuses. However, feelings are that some operators in each market continue to be locked into the more traditional city centre termini and lack the flexibility required by the likely passenger markets attracted to coach. This is one reason for the success of more innovative (and student originated) services such as FlixBus in both markets.

Following liberalisation and the immediate 12-months of intensive competition, there was a strong appetite amongst the German population to try inter-city coach and make potential long-term mode switches. This was also evident in France with the market described as seeing an unprecedented step change following liberalisation.

Overall results for express coach use in Germany following liberalisation were impressive. Though starting from a low base of service numbers, mainly in the Berlin area, prior to 2013, increases in domestic coach services has been dramatic; Figure 22 demonstrates the increase in services, pre and post liberalisation, showing services operated per week for each month (excluding airport services) and the point (red line) at which liberalisation occurred.

Figure 22: Number of German domestic services per week (Gipp, 2016)



In France, growth has been equally significant with August 2015 just after liberalisation seeing 250,000 journeys alone compare to 100,000 in the whole of 2014 (The Economist, October 2015).

However, in Germany from 2014 to the present-day growth has been suppressed to 25% (2014-15) following the market's rapid consolidation. The market leader has focused on international expansion at the expense of midweek frequencies and IC Bus, the coach network operated by state rail operator Deutsche Bahn (DB) has concentrated on fewer, but more frequent, short links that complement the rail network as well as providing choice through price and time differentials. The market in Germany remains contestable but has seen little new entry even

given the change in midweek frequencies by the monopolist. This is a similar phenomenon to that seen in the UK when National Express cut frequencies and raised fares in the mid-1990s but attracted no new competition from new entry. It shows the power of the market leader in each case, and sensitivity of the market as highly price-elastic and therefore difficult for new entrants to succeed. In France, the market has been heavily influenced by the German experience and there is evidence that economies of scale are now occurring amongst the oligopoly operators – this is blocking new smaller firm entry but maintaining an equilibrium between larger firms and keeping Flixbus from increasing its share.

In both markets abstraction from private car travel has occurred, while a very low level of abstraction from competing public transport modes is reported.

7.2 The market before liberalisation

7.2.1 Germany

Before liberalisation of the German domestic express coach market freedom of entry was heavily curtailed in lieu of the perceived benefits of rail. Like the UK, Germany had restrictions on domestic express services from the 1930s though the market was more heavily restricted with an almost total ban on the development of coach travel. From 1981, DB acquired the ability to run long-distance coach routes when the Government required it to take over all postbus services. However, it did not develop this market for fear of abstraction from its own rail network (Knorr and Lueg-Arndt, 2013) - in hindsight this was a short-sighted decision.

The almost total protection of the rail network led to inefficiencies and a stagnating of the passenger market with a falling share of the total inter-city market in the years preceding liberalisation, and for a longer period, falling levels of passenger facilities, operational efficiency, and overall productivity (Knorr and Lueg-Arndt, 2013). This is similar to the UK's rail experience where only in the mid to late 1970s did British Rail start to address stagnation and low productivity with investment in high-speed routes – protecting itself from future competition.

Express coach services in Germany were limited to protect DB. Prior to the market being liberalised only a small number of services operated, with these being legacy routes connecting East and West Germany to Berlin, limited airport services, and niche market routes operating where rail provision was poor, unlikely to justify investment or where overnight services connected main cities (such as Mannheim and Hamburg). Only 86 services were authorised, the majority connecting Berlin and operated as a joint venture of four companies, two of which were owned by DB with two being true independents (Knorr and Lueg-Arndt, 2013).

The market for all long-distance travel in 2012, just prior to liberalisation, accounted for 62.4bn passengers annually with pre-liberalisation scheduled coach only accounting for 1.2bn (Knorr and Lueg-Arndt, 2013). The same year saw only half the kilometres of timetabled service operated as by the end of the first year of liberalisation in 2013, and route quantities grew faster still - doubling from the number prior to liberalisation in six-months and with passengers increasing by 9% in just three-months (Augustin, et al, 2014).

With a large existing market for long-distance travel and over 5,000 small and medium sized independent firms (similar in quantity terms relatively to the UK in 1980) having the opportunity to enter the market there was huge potential for success. However, it was felt that many firms were too small and lacked the financial and operational resources to enter the market long enough to reach a self-sustaining level. But in support of market entry, the core markets for these operators such as school and municipal service contracts was starting to shrink at liberalisation and it was felt that there were available resources and scope to redeploy to the new domestic long-distance market (Knorr and Lueg-Arndt, 2013).

Potential barriers to success of liberalisation focused on the size and nature of Germany, being polycentric, and the potential for DB to quickly react to competition, through both its rail network and its extensive local bus operation totalling over 12,000 vehicles nationwide. A lack of good standard coach termini also had the potential to limit successful launch of coach services (e.g. Köln).

7.2.2 France

The market for domestic coach travel prior to liberalisation was limited. Before 2011 there were heavy restrictions on inter-regional coach services, designed to ensure protection for domestic air and rail modes from road based competition. The French rail network focuses on main corridors where frequencies and quality are high, however, outside of these regional rail services are thin, creating potential for inter-city coach services. Historically rail development started with the long-distance network prior to regional connections being developed, the latter focused on road based links instead. France are pioneers in high-speed rail travel being the first in Europe to invest in this sector, and as a result, of the 30,000km of rail, over 2,000km is of high-speed configuration. The rail and road network has historically focused on Paris and the country is not polycentric like Germany. While north-south connections are good with some by-passing (or traversing) Paris, the east-west routes are poor, often requiring a connection across Paris if travelling by rail (Blayac and Bougette, 2016). This provided scope for coach competition success through and direct regional links and the east-west corridor is where one consortium, Starshipper, found early success.

However, prior to liberalisation through the 'Macron Law' some competition did exist using specific articles and legislation:

- Inter-regional services through Articles L. 3111-1 and L. 3111-2 (128 in 2013);
- Services set up in place of local area rail services where permitted; and,
- Three services created as 'national interest' routes; two routes from Picardy to Roissy airport and one route from Beauvais airport and Paris (Porte Maillot).

Following changes to regulations for international coach services in 2009, and amendments to Regulation 1073/2009, the market expanded using 'cabotage' in 2011, with European Parliament law being incorporated into French law (Article L 3421-2).

This allowed international coach operators to open the doors of their services to domestic travellers if strict rules were met for the number of travellers carried in this way. Domestic travel could occur, but the coach service had to start or end at a destination outside of France and the operator had to ensure that at least half of all passengers on board were not travelling between two domestic French locations.

This stimulated domestic operators to provide international connections with the specific aim of cherry-picking key internal markets between popular locations, for example, SNCF's iDBus (now Ouibus) operation running between Paris and London but providing a stop at Lille to ensure a Paris-Lille link in competition with other road services and providing choice between rail and road modes through price differentials.

Like the liberalisation of other markets, French express coach liberalisation was a stepped process, starting in 2011 with cabotage and then later in 2015, full liberalisation, it was based on fixed limits in distance terms for qualifying routes through the 'Macron Law'.

Prior to 2015 SNCF observed the German liberalisation process; the effects on domestic rail and the latent reaction to modal competition by DB. To mitigate these errors, SNCF launched iDBus (now Ouibus) in 2012 and were one of several operators to make use of the 2011 cabotage opportunities to build brand awareness and market share ahead of full-scale liberalisation (the others being Isilines and Starshipper). SNCF employed Paul Bunting, a prominent manager from the UK express coach industry to establish iDBus and with this pre-emptive activity, although across a shorter timescale there are some parallels to the 1970s NBC approach with development of National in the UK prior to the 1980 Act.

7.3 The rail market

7.3.1 Germany

Rail transport in Germany remains under state control. This is almost exclusively the case for the extensive high-speed rail network where DB ICE rail provides regular city to city links across the country. The state operates infrastructure and rail services; however, the regional networks are increasingly undergoing transition into the private sector with lines being tendered by federal state authorities progressively and a range of competitor firms winning 10-year and 15-year rail contracts. National Express became the first non-German operator of domestic rail services in 2015, but many contracts have been won by German-based firms or DB regional subsidiaries.

The rail network across Germany is dense – with most areas seeing some level of rail service and connections to mainline stations to access the high-speed network. Following the requirements of EC 91/440, like many other European state-owned rail networks business restructuring occurred in 1999 which saw five business centres (subsidiaries) created to ensure greater future freedoms for competition and a decentralisation of market power. Maintenance, property, track, infrastructure, and passenger services were all divided with the latter being divided into long-distance (high-speed) services and short to medium distance (regional) services. It is the latter which has seen significant competition from new market entrants with the former, long-distance services, remaining a state-controlled monopoly and operating feeder road transport services as IC Bus.

As with France (below), there is a contrast in the perception and functionality of the high-speed and regional rail network. Significant investment is seen across the high-speed network with hundreds of services offered each day and third generation trains providing significant levels of speed, comfort, and on-board facilities. Contrasting to this is the slower regional network using basic trains and low operational speeds. Here there is more scope for coach/rail competition between medium to large sized towns and cities. Coach journey times are close to regional rail services and fares are more competitive and lower than rail, though coach frequencies are also lower in comparison.

7.3.2 France

The French rail network is state funded, owned, and operated; this includes all rolling stock, stations, track, and supporting infrastructure. All facets of the system are combined under one single entity, SNCF, and the current network is split into inter-regional and high-speed (TGV) lines providing comprehensive coverage of the country. In recent years, there have been concerns over the continued viability of some parts of the network, leading to several steps taken:

1. Development of the Transport Express Regional (TER) network – services designed and operated by regional councils aimed to better meet local needs;
2. Replacement of some TER services with road transport to better improve access to the TGV network. This is at lower cost, and uses more intermediate stops (e.g. in the Valence area);
3. Trials of open-access rail services with Thello – a joint operation between SNCF and Trenitalia; and,
4. Development of legislation to liberalise the inter-city coach market, specifically designed to supplement and stimulate wider long-distance travel.

With no plans to further devolve state ownership and operation of the rail network in France, unlike Scandinavia and more recently Germany, SNCF instead entered the inter-city coach market in their own right with Ouibus prior to full liberalisation of the market in 2015 using cabotage laws.

7.4 The market since liberalisation

7.4.1 Germany

Following liberalisation, any operator can enter the domestic inter-city coach market if it applies to register the service with the correct regional administration. Services must operate for at least 50 kilometres (31 miles) in length (like the UK) with a gap between passenger stops of not less than one hour between timed points. Licenses are required for operation and the application must be adhered

to for a minimum three-months, after which time the operator may change the schedule without permission (fares are un-regulated) (Knorr and Lueg-Arndt, 2013). With these low entry barriers and the scale of the country, the market grew intensively during the first 12-months with several firms entering the market and attempting to win market share through low fares, on-board facilities / WiFi, frequency, internet booking, and some with pan-German networks and guaranteed connections.

The size of Germany and its polycentric nature is different to that of the UK (where London was a significant hub with important sub-city locations; Bristol, Birmingham, and Glasgow used). As a result, Germany has spawned two different operational models that have seen success when properly applied; firstly, full national networks which need substantive resources to function sufficiently to maintain market share (such as FlixBus) and secondly, a focus on one corridor between two or three principal locations (such as Hahn to Frankfurt) (Knorr and Lueg-Arndt, 2013). Of note here is National Express, whose market entry failed by trying to cover too many locations (half of Germany) with too few resources and seeing long journey times, low frequencies, and heavy fare competition occur – in comparison, FlixBus at the same time used almost five-times as many vehicles to cover all of Germany; National Express using 23 coaches and FlixBus more than 100 and has remained in the market.

Some markets have seen isolated success; airport to city links are popular and sustainable by independents; one operator (Deinbus) has focused significantly on the student market (campus to city) transfers; IC Bus (DB) has made headway in running complementary and connectional services to the high-speed rail network giving price alternatives (for slower road journeys), filling service gaps, and extending the reach of the rail network with feeder routes; cross-border routes have provided stimulus for in-country and neighbouring-country activity (FlixBus spreading to France and Italy); and, overnight services are popular with slower journey times helping services to be successful as arrival times meet 'wake-up' times at destinations.

In Germany, new market entrants have used brand marketing, akin to approaches in the UK and Scandinavia. The imagery developed for new German services aligns with their internet presence and firms have set themselves apart using bright colours and powerful fare messages to compete for attention in an extremely dynamic market. The early days of competition saw market entry from up to fifteen new entrants and the main player was MeinFernbus which enjoyed a near 40% market share by the end of 2013. However, while initially price was the main competing factor this has now subsided in favour of on-board facilities, apart from corridors where new firms enter (or try to enter) the market. Critically, a continued lack of through ticketing on same operator services is leaving passengers without guaranteed connections even though a 'network' is operated and this has the potential to see 'savvy' users swap providers at hub cities (Knorr and Lueg-Arndt, 2013). This differs to other markets, including the UK, where the market leader provides through ticketing.

The market began with higher success on shorter, 2.5 to 4.5 hour one-way trips and aggressive competition based on price, between coach and rail with the regional rail network more susceptible to competition due to its lower speeds.

Coaches attracted students and senior citizens with the market demographic mirroring that of coach markets across Europe; time-rich and lower income segments making the most use of the cheaper but slower services. However, in comparison to many regional rail services which often involve connections *enroute*, the speed differential falls, making coach more competitive. This has led to a useful marketing boon for inter-city coach operators who run directly through principal towns to cities and have seen increases in passengers who appreciate the convenience of direct connections compared to changing trains.

Following liberalisation, the number of routes increased significantly from 86 (2012) to 277 (2015). Passenger numbers grew from 3m in 2012 to 19.6m in 2014, aided significantly by several rail strikes (Knorr and Lueg-Arndt, 2013) and reminiscent of stimuli for UK express coach development through the decades. As early as 2014 industry reports in Germany suggested that a clearly dominant operator was emerging; MeinFernbus, with a 45% market share of passenger journeys and a pan-German network serving over 120 destinations was leading

remaining competition; FlixBus 23%, Berlin Linienbus 22%, and ADAC (Postbus) 8% with the remainder of the market served by c14 smaller providers, including the short lived National Express operation (www.thelocal.de, 2014).

However, in 2015 MeinFernbus and FlixBus merged to form a combined market share of at least 68% and taking the FlixBus name. Prior to this National Express had left the market in the last quarter of 2014. ADAC then sold its operations to FlixBus in 2016 and more recently IC Bus has scaled back operations to around 12% of the market. Deinbus remains in the market even though the fierce fares war brought this firm close to bankruptcy.

It is now estimated that through significant market contraction and the additional purchase of Megabus services in 2016, FlixBus now has a market share close to 90%. The business model used by FlixBus, and many other competitors, is akin to National Express. The branded firm acts as an umbrella, overseeing marketing, fares, and planning. Diagrams are contracted out with small and medium sized local firms bidding for the work. With a shrinking local market, this new source of revenue has allowed them to diversify at no revenue risk and work within the new sector with the protections offered through the contract model they adopt. This has arguably curtailed direct entry into the market by these firms (as in the UK) and ensured that umbrella firms act as monopsonists within a highly competitive sub-market.

Domestic express coach competition has seen significant competition with the rail network. The only two on-rail competitors to DB's high-speed services have left the rail market citing coach competition as the reason. Furthermore, increased competition has forced DB to freeze traditional fare increases, ease the restrictions on super-advance fares, introduce dedicated low fare inter-city trains, and improve on-board facilities including WiFi, at seat power, and media entertainment. Recognising the in-roads being made by coach firms in regional rail competition DB was slow to react to the threat of competition but is now working to 're-connect' many cities and towns to the high-speed network through better rail services and IC Bus services.

Germany in 2015 was in the early growth stages of market development with rapid change occurring through exits, mergers, and acquisitions of smaller operators. As such there was a fast contraction in the market place through with at best an oligopoly structure reached (Knorr and Lueg-Arndt, 2013) though subsequent mergers in 2015/16 have moved this to a current monopoly. However, inadequate terminal facilities and driver shortages due to high license costs remain as barriers to the market along with continued competition, and state ownership of DB. FlixBus, with a near 90% share of the market, can exercise market power and advantages of scale in a near monopoly structure.

7.4.2 Germany Summary

Liberalised in 2013, the first three years have shown a cyclical process akin to the initial period of deregulation in the UK market. Although no dominant operator was in a leading position, unlike the UK, there has been a rapid rise to market dominance by one new firm though a mixture of mergers, acquisitions, network performance and technology application:

- Following initial rapid expansion, the market is now contracting with one dominant firm, FlixBus holding close to 90% market share, and developing its model around low fares, yield management, and multi-media channels;
- Germany is unique in being polycentric and the coach market leans towards short trips of 2.5 to 4.0 hours, reflecting typical distances between German cities and a lower focus on Berlin as a dominant hub for operations, unlike the UK where London is pivotal to most networks;
- Competition has fallen away due to aggressive fare pricing and low returns for new entrants with higher overhead costs. Mergers have concentrated the market (MeinFernbus and FlixBus) and most companies now supply the dominant firm rather than compete as it uses a similar contracting model to National Express in the UK;
- Rail plays a significant role; high-speed services are state operated but there is increasing privatisation of regional services. The regional rail

network is slow and expensive, giving opportunity for direct coach services to win market share; and,

- Traditional market segments use coaches and benefit from an overall increase in quality. No dedicated airport network exists with most served as part of city to city connections, the market is important however and often the only source of now limited independent activity e.g. Hahn (Frankfurt) and Nuremburg.

7.4.3 France

The aim of the French Government through the 'Macron Law' liberalising domestic express coach travel was to create a low-cost alternative to rail and create new demand from passengers who would not otherwise have travelled due to cost. However, moves to take a dominant stake in the market began prior to liberalisation, with active firms and associations taking advantage of cabotage and permissions given for the registration of 'occasional trips'.

Starshipper, an association of 32 small to medium sized coach operators started international services in 2012 providing domestic links as part of their network of services to locations such as Turin. Similarly, iDBus (SNCF) began in 2012, running from a Paris Hub to London, Brussels, and Amsterdam while including domestic links between Paris and Lille; competing directly with Eurolines (coach) and Eurostar (rail). The last entrant to the market was Isilines - a subsidiary company of Transdev, (60% owned by the French government). Transdev also operate as Eurolines across France and provided domestic and international destinations. Isilines opened 17 domestic express coach routes ahead of liberalisation and used a loop hole in existing regulations to operate domestic services as 'occasional trips'. These approaches showed observation of lessons learnt in past processes where incumbents prepared aggressively for changes in the market structure using their ability to mobilise early (National Express / CoachMAP - late 1970s and NOR-WAY BUSSEKSPRESS - 1997).

Liberalisation has allowed uncontested opening of new lines over 100 kilometres (62 miles) in length with this distance also applying to intermediary stops. This threshold distance is higher than Germany and the UK (both 32 miles) but the same as Sweden with the limit being set this high to protect subsidised inter-urban bus routes, more common in France than Germany (Blayac and Bougette, 2016). Any routes that are less than 100 kilometres between stops must show that they will not weaken the case for existing public service obligation (PSO) – the test understanding of the likely substitution effect between rail and road services.

With three significant entrants, the market share in passenger journeys between operators two months after liberalisation in 2015 was; Eurolines / Isilines 59%, Starshipper 23%, iDBus 2% with the market being completed by several smaller operators including FlixBus (1%) and Stagecoach Megabus (1%) and the cabotage operations of ALSA (14%) who provided services between France and Spain. Based on these market shares and using the proxy of 17 services operated at the time by Isilines it is likely that 31 domestic express services operated at the point of liberalisation.

In the first full year 3.4m passenger journeys were achieved and aggressive fares competition was used to establish new routes before fares increased after market share was established similar to National Express in the UK in the 1990s. However, as a mode coach still only counted for 2.5% of the long-distance market with rail at 17.3% and air 9.3% by 2016. In operational terms, 193 French cities were served by the market and typical load factors stood at 41%, lower than the impressive 55% in Germany but still significant (Blayac and Bougette, 2016). The move to increase fares once the market has settled may be deemed short sighted given the lessons learnt in the UK by National Express. However, market shares in 2016 showed consolidation; Eurolines / Isilines 41%, FlixBus 32%, Starshipper 13% and Ouibus (formerly iDBus) 10% (Buses, October 2016). The article also notes the remaining 4% of passenger journeys belonging to Megabus. However, two significant mergers occurred in late 2016; FlixBus purchased the mainland Europe operations of Megabus, and, the Starshipper consortium and Ouibus announced a 10-year contractual agreement to co-operate - seeing the 'integration' of the Starshipper network of 112 departures into the Ouibus

business, with consortium members receiving, in total, a 5% stake of Ouibus in return. These acquisitions and mergers increased the FlixBus share to c36% and the Ouibus share to c23%.

As with the German and UK markets, the operating models of some firms are based around the use of a branded umbrella organisation generating competitive interest to operate contracted services. FlixBus use this approach with it being described as very innovative and 'Uber-like' with revenue and risk shared 70/30 (contractor/FlixBus) and the extensive use of technology lowering operational costs to manage fares, capacity, and demand (Blayac and Bougette, 2016).

Most users of coach services are young travellers, with FlixBus reporting 60% of passengers aged 20-40 years old. (Blayac and Bougette, 2016). As with Germany, coach in France is most competitive with regional rail services which are significantly slower than the TGV network of high-speed lines and more expensive than coach. However, barriers to market entry remain. Aside from the fast contraction of the market seeing an oligopoly structure emerge with dominant and well-resourced firms leading on innovation and network development, the mode faces considerable competition, not just from rail but also car-pooling – a popular alternative mode. Additionally, the French network, in a similar fashion to that of Germany and the early 1980s UK market suffers from a lack of good terminal facilities for coach services. Ouibus use rail stations owing to their SNCF ownership. However, other operators have found city terminals of poor quality and located away from central business districts (CBD) (e.g. Isilines in the eastern Paris suburbs requiring a metro journey to the city centre).

7.4.4 France Summary

The market was liberalised in August 2015 and has seen considerable expansion of passengers and contraction of firms through recent mergers and acquisitions;

- The market was liberalisation in two stages; cabotage from 2011, and the Macron Law in 2015. This provided time for existing operators to prepare for liberalisation and build market presence and share;

- SNCF has remained in state ownership and, through its Ouibus operation has become a prominent player in the inter-city coach market. Transdev is also active in the market (Isilines) and is 60% state owned;
- The market has grown rapidly from c31 routes to over 100. Passenger numbers have grown significantly from the days of cabotage and the market has contracted to three firms with Ouibus, FlixBus, and Isilines all key players; and,
- A lack of coach termini across the network has hindered progress of a market (as has also been seen in Germany) used by time-rich younger travellers. Current services operate from kerb side locations, rail station forecourts, or open parking areas (akin to early UK experience). While good news for modal transfer, it does little to promote the coach to a higher status than second fiddle to the far more established and well-resourced state rail network.

7.5 Common issues in both markets

In general, both recently liberalised markets have suffered from a lack of usable infrastructure. In Germany, city authorities and federal states have been reluctant to find suitable space to accommodate competitive coach services, an example being Köln where scheduled coach services are banned from the CBD. Going forward, the lack of creation of appropriate terminal facilities for coach to coach and coach to rail interchange in Germany is a potential barrier to success (Gipp, 2016). In France, as noted above, some operators have been allowed to use rail station facilities but others (FlixBus and Isilines) have been forced to use coach parks, out of town car parks, or older peripheral transport interchanges. These initial experiences are similar in some respects to issues in the UK where access to some key terminals was unavailable to competing operators (e.g. British Coachways), due to state control and protection afforded to National Express. The UK experience required amended legislation and transfers of ownership to resolve the issues and the same is recommended for other markets. However, to mitigate this, the passenger market in recent years has moved much more to kerb-side stop locations – these being convenient and matching better the

demands of typical passenger profiles. Operators, particularly in Germany, have been reluctant to adopt this approach apart from FlixBus who is now dominant in the market and who serve many university campuses and suburban kerbside locations.

Both markets also suffer from a lack of high quality regional rail networks, both having focused on developing and maintaining high-speed lines between all major cities. The German rail market is now reacting to this situation and opening more regional routes to provide better links to nearest cities and high-speed interchanges. However, this will take time and has therefore been, and remains to be, a source of growth for coach services with much success in both markets seen in the provision of direct links to/from regional centres and major cities, often along the same rail line of route with very little end to end time penalties.

With considerable growth in demand in each market, and subsequent network expansion, a new pressure is growing with respect to driver availability (Gipp, 2016). With costs and time-lag associated with obtaining licences to drive commercial vehicles, the pipeline for drivers is beginning to fall out of step with service expansion requirements and this is exacerbated by competition between services within the market for both passengers and drivers. This threatens to add a further barrier to entry for smaller firms and potentially limits the overall growth of the market in an otherwise free-market environment. Issues with driver availability is common in all public transport markets and a recommendation would be to ensure more efficient licensing processes and more attractive employment packages for driving staff including more standardised levels of pay.

Cross-border services are also an area where the coach in both markets building significant market share. These integrate well with services in neighbouring domestic markets and the flexibility of coach as a mode allows unique corridors to be developed where rail links are unlikely to easily exist or develop. Pioneering cross-border services, firms such as Public Express led the way in the early 2000s and were the stimulus for the progressive liberalisation of domestic markets when cabotage rules were contested and innovation used to find ways to satisfy public demand.

Chapter 8 – Conclusion

8.1 Overview

The deregulation (or liberalisation) of inter-city road transport across Europe has evolved across more than 35 years and the UK was the first country to pass legislation aimed at opening the market to competition (Chapter 3).

In the UK, the 1980 Transport Act allowed the potential for supply and demand to be self-balancing through free-market forces creating a platform from which; entrepreneurial activity could be stimulated; public choice widened; prices (fares) kept low, and profits retained at normal levels. Central to the Act was the theory of contestability (Chapter 1). This is not a market structure or state, but instead a process used to facilitate a change in market structure and position over time. Since 1980, the UK approach has been adopted across Europe in several markets, including Sweden (Chapter 5), Norway (Chapter 6), and very recently in Germany and France (Chapter 7). In each case local variations have applied, and lessons learnt along the way, and all provide the platform for collective review and comment on the success of the approaches used.

This is exemplified by SNCF (French State Rail) who learnt from the complacency and delayed reaction to liberalisation by DB (German State Rail). Here, SNCF set up their own inter-city coach operation (Ouibus) ahead of liberalisation (similar to the UK / National Express situation in the 1970s) and developed a simple network of services linking cities and connecting with the rail network. In Germany DB only reacted to the threat of coach competition some months after liberalisation by setting up the IC Bus operation. The result has been that while FlixBus dominate the German market with a 90% market share, Ouibus is keeping the FlixBus share lower at around 40% in France - as described in Chapter 7.

With operational freedoms for domestic inter-city coach services created, the level and extent of recorded independent entry has been variable. Entry is defined as independent entry (not under the umbrella of an established market brand) and it is concerned with all facets of long-distance coach operation. Across the

years entry has mainly been physical with branded vehicle and staff assets operating a steady state service. However, in the last two years entry has also been 'virtual' with e-commerce companies matching customers to available resources and running to 'crowd-sourced' demand. Virtual operations are an exciting new development and will invariably increase significantly in the short-term. These new firms have the potential to open inter-city coach travel to new markets and transform the landscape for market entry which at present is defined at two levels, macro, and micro:

- At the macro (strategic) level market entry with a domestic network product has been uncommon and has either been unsustainable in the medium-term (British Coachways - Chapter 3) or the subject of rapid consolidation between smaller competing network products after competitive attrition or merger (MeinFernbus and FlixBus - Chapter 7). Where an incumbent network pre-dated liberalisation no examples of strategic level entry exist today in the studied markets from the point of liberalisation. However, there are some examples of later strategic entry in mature / settled markets, these seeing greater success and continued longevity; such as Megabus UK with an approximate 40% market share and commencing in 2003(Chapter 4), and TIMEkspressen in Norway (Chapter 6).
- At the micro (corridor) level there is far greater evidence of successful independent entry into single corridor and niche markets. Examples include the M4 corridor in the UK (sustaining independent entry and competition since 1980), city to city routes in southern Scandinavia (Chapters 5-6), and, in all markets, airport services have been a success story of deregulation due to often poorer rail connections and the rapid growth of low cost airline networks at regional airports.

The research was stimulated through observations of continued and contrasting fortunes between macro and micro level entry in the UK. Set within the environment for potential competition (contestability) and posed for the UK and using liberalised European markets as comparators the research sought to;

Understand for the UK market that given the freedoms afforded to all firms within and outside of the market for long-distance scheduled coach services, why is there a lack of continued entry by small to medium sized coach firms?

By way of a summary, the research has found that in most cases independent market entry has been largely absent from each market on a continual basis, however, in Sweden there is a higher proportion of small and independent firm activity than in other markets studied; 79% of commercially viable services (90% of all inter-city services) operated by three dominant firms and the remaining 21% split between 25 smaller operators due mainly to no network provider in place prior to liberalisation. Additionally, a common conclusion has been that following post-liberalisation settlement of each studied market, a continued demand for the operation of contracts awarded by large firms responsible for operating common branded networks exists. This in turn has helped maintain a vibrant sub-market of smaller private and contract hire firms and the potential for wider competition. This has also ensured some niche market independent entry continues and has seen larger firms adopting business models that have created monopsonistic market structures within their 'home' market to deflect direct entry and competition on main corridors through competition, instead, for branded contracts operation.

By way of contrast, Scandinavian markets maintain a theme of co-operative operation; NOR-WAY BUSSEKSPRESS remains a significant service provider utilising a partnership of around 25 firms and Swebus Express actively partners otherwise rival firms to deter otherwise harmful and wasteful competition. In 2013 one of the partners in Norway's co-operative, Nettbuss, commenced its own network, competing directly with the co-operative. It caused a degradation of the incumbent's dominant position and the number of partners has since fallen to nine - competition contracting routes and partners.

In the UK, the vibrant market for 'third-party' contractors is ensuring two original deregulation policy aims continue to be met:

- Entrepreneurship - the development of new 'virtual' service providers, such as Sn-ap in the UK requires on-demand private hire opportunities and uses the private and contract hire sector for its resources; and,
- Contestability - the scale of the private and contract hire market ensures the threat of competition from firms outside the market remains - as seen with higher rates of independent market entry into (and out of) the airport services market and the resultant focus on low costs and high supply levels by incumbents on the national networks.

A major theme of domestic inter-city coach liberalisation, and the observable changes in market structure over time, has been the parallel development of technologies to support operations. This is particularly the case with e-commerce. As markets have opened to competitive freedoms the need to maintain market share has pushed the pace of technical development, formerly in vehicle design, but more recently in digital systems.

In the early years of UK deregulation, the lack of supporting technology helped incumbents, such as National Express, retain dominant positions. However, e-commerce, utilising internet functionality and low-cost fare sales, has seen new competitors emerge. With no requirement for fixed infrastructure costs, firms such as Megabus and FlixBus combine internet innovations like yield management with social media and 'Uber-style' mobile technology to enter markets rapidly. Coupled with low cost fares and standardised service products they quickly win market share and challenge incumbents who are predominantly slow to react (Chapter 4).

8.2 Generic lessons learnt from case study markets

Following the study of the UK market and case study material gathered for Sweden, Norway, Germany, and France there are several metrics that can be used to compare markets and highlight generic lessons that assist in answering the research hypothesis. Figure 23 shows the metrics for the processes applied in the lead up to, and liberalisation of, each studied market.

Figure 23: Comparable key metrics for studied markets

Process	UK	Sweden	Norway	Germany	France
Date of coach market liberalisation (final if two stages)	1980	1999	2003	2013	2015
Single or multiple stage liberalisation process	Single	Two-stage	Two-stage	Single	Two-stage
Strong operator / network in place at liberalisation	Yes	No	Yes	No	Yes
Rail ownership at time of coach liberalisation	Public	Public	Public	Public	Public
Date of rail service privatisation (final if multi-stage)	1997	1999	Remains Public	Remains Public	Remains Public
Minimum Requirements for market entry in operational terms	Operator License (UK) or equivalent required in all countries				
	No notice / 30 miles	62 miles / cross 1 border	No Notice / distance	Notify schedule / 31 miles	No notice / 62 miles
Estimated speed of operator quantity consolidation	5-8 years	4-6 years	3-5 years	2-3 years	2 years
Level of technology in the market at liberalisation	Low	Medium	Medium	High	High
Number of primary firms in the current market place	2	3	3	1	3
Estimated market structure in the current state	Dominant firm oligopoly	Oligopoly	Oligopoly	Non-coercive Monopoly	Oligopoly
Reference Chapter(s)	3 and 4	5	6	7	7

In answering the research hypothesis, the summary of metrics in Figure 23 sheds light onto the relative performance of each market and why success for independent operation appears to remain unsuccessful. Two metrics emerge as leading reasons; the level of technology in the market, and; the existence of a network provider at liberalisation.

Only two markets, Sweden, and Germany, had no existing domestic network providers in place at the time of liberalisation and both have seen differing outcomes primarily due to the level of digital technology available;

- Sweden liberalised at a point in time where digital technology was still to be developed and was not widely available - instead more traditional competition resulted in higher levels of long-term success by smaller firms, around 25 providing 21% of all services, and an oligopoly market structure (see Chapter 2 and 5). This result was also aided by the geography and poorer rail network of Sweden compared to the UK.
- Germany liberalised in 2013 when digital technology was well developed and a common tool for potential travellers. The use of e-commerce and social media played a significant role in rapidly condensing the market to a near monopoly. While at liberalisation a large number of firms of various sizes entered the market place in Germany, two major firms emerged using sophisticated digital technology and aggressive fares competition to secure market share. These firms have since merged into one clearly dominant provider and forced a market structure best described as a non-coercive monopoly (see Chapter 4).

In contrast, where a domestic provider already existed at liberalisation, the long-term effect has seen the market move from a controlled monopoly to an oligopoly, or a variant of this traditional market structure such as the UK (dominant firm oligopoly), regardless of the availability of digital technology.

In the UK and Norway, the existing provider was an 'umbrella' operation, with a single brand providing a cohesive network but using sub-contractors ('third party' firms) to provide vehicle and driver resources needed to fulfil services. In Norway

this was achieved through a co-operative and revenue share basis (like Associated Motorways (UK) - see Chapter 3). In contrast, in the UK third party firms were paid on a 'rate per mile' basis with no revenue share or vested interest in the success of the brand or network. The situation in France is slightly different - the operator at liberalisation was a subsidiary of French state railway firm (SNCF) and provided all resources, continuing to this day as such. Uniquely the UK approach has seen National Express create a monopsony market. Smaller firms see less risk in bidding for and working within this private structure than providing own-brand competitive services.

In all markets ownership of domestic rail services has arguably had little effect on the existing inter-city coach market structure. However, rail, as a mode regardless of ownership has created significant inter-modal competition, primarily based on fares. The rail industry has particularly used lower off-peak period pricing to fill underutilised rolling stock and move price sensitive travellers away from peak services - providing capacity for time conscious and higher yield commuters. With coach uncompetitive in most cases regarding journey time, it's one advantage can be cost, therefore significant off-peak fares competition has been damaging to coach services who are unable to offer peak differentials to cross-subsidise off peak offers. As a result, without significant financial resources to whether such competition smaller firms have struggled to remain on trunk corridors and larger firms rarely see abnormal profit levels unless the rail offer is not substantively better in journey time, such as Oxford/London where a unique duopoly market is sustained.

Figure 24 draws the key lessons learnt across the studied markets and identified metrics. These lessons point to reasons for the likelihood of limited small and medium sized firm success in liberalised markets, particularly the UK. As such, these lessons may provide a market 'pulse-check' for countries still looking to liberalise domestic inter-city coach markets;

Figure 24: Comparable key metrics for studied markets

Liberalisation Issue	Lesson
<p>Structure prior to liberalisation - there is a need to define if the market is a controlled monopoly at the macro or micro level. The former favours dominant operator existence prior to liberalisation, whereas the latter may see routes divided among multiple firms.</p>	<p>Define the market structure at each affected level.</p>
<p>Existence of pre-liberalisation monopolists - where these exist, then long-term small and medium firm success may be limited if incumbents remain active. Even where no pre-liberalisation supplier exists, (Germany), small firms will still struggle to survive if consolidation sees an agile and aggressive monopolist emerge.</p>	<p>Remove monopolies before liberalisation and use competition policy to limit firm size by total turnover in markets where competition will benefit travellers.</p>
<p>Network effect - Where an existing network or brand exists pre-liberalisation the success of entry by small and medium sized firms on individual routes is limited due to the recognition, reach, and power of the network firm. When smaller firms have entered the market with a network, success has been limited due to a lack of brand awareness and customer accessibility; e-commerce has removed some of these barriers as seen by Megabus and FlixBus.</p>	<p>Ensure equitable access for all firms to network access points; these include stations (hubs), interchanges, kerbside stops. the internet is readily accessible and has mitigated issues with fixed stop locations.</p>
<p>Financial resources - 'deep pockets' are required to sustain entry into post-liberalisation markets. Where niche markets are identified long-term resources are required to deflect interest from large firms. In some cases, small firms partner with large firms (Trathens / National Express). Megabus' entry to profit was only possible with 3-years loss-leading support by parent firm Stagecoach.</p>	<p>Consider liberalising in stages - through gradual legislation to give new competition or on a corridor by corridor basis. This may help small and medium sized firms to spread costs.</p>
<p>Intra-modal competition - the number of potential market entrants is key. A vibrant sub-market of small firms allows contestability to function. While this helps policy objectives it may fail to realise independent entry into market by these firms, more often providing a pool of available resources to help major firms adapt their business model to maintain and grow their own market presence. National Express (UK) and FlixBus (Germany) being examples.</p>	<p>Ensure support for sub-markets and removal of monopolists prior to liberalisation.</p>
<p>Inter-modal competition - the level of activity in the rail market is important while the type of ownership has not had a negative effect on the coach market. The process of rail franchising has led to mixed abilities for rail to compete on price in some markets - being dependent on commitments made during the franchise. Where rail is state owned some have created their own inter-city coach arm. This has exacerbated issues for smaller firm entry into the market due to parent rail (state) firm. subsidies (e.g. Ouibus)</p>	<p>Ensure rail as a mode is unable to use public funds to repel competition, provide equitable access to operational facilities, and remove the need for rail to object to the development of road routes.</p>

Further to the lessons outlined, one further lesson of note concerns Co-operatives. These partnerships between multiple firms have enjoyed mixed success - mainly affected by the availability of technology and residual post-liberalisation barriers to market entry.

British Coachways is a high profile industry example of a deregulation stage co-operative (see Chapter 3). The consortium was short lived due to; a lack of adequate terminal facilities (of high customer importance in the 1980s); competition based solely on low-fares; a smaller network of ticket sales agents, and; a lack of brand awareness in comparison to pre-deregulation incumbent, National Express. Given the focus on low-fares, it is the author's view that had e-commerce have been significant at this time the long-term outcome may have been different and this is demonstrated to a large extent by the later success of Megabus who have used e-commerce to successfully enter the market with few fixed overhead costs and with a core network of services mirroring that of the British Coachways' network in 1980.

In comparison the Norway co-operative formed ahead of liberalisation and with little technological assistance remains today, demonstrating the effect of a pre-liberalisation incumbent. Its continued survival is also due to the limited nature of rail competition (a bi-product of Norwegian geography) as well as the staged process in removing restrictive criteria for inter-city express operation. This allowed a slower pace of market development, lessening competition between coach and rail routes where this could occur and supporting collaboration between independent firms (see Chapter 6). A more recent example of co-operative activity is seen in France. The Starshipper co-operative used e-commerce and exploitation of niche market opportunities to create a foothold a year prior to full liberalisation of the market using legal cabotage practices in France at the time (see Chapter 7). However, they have since entered into a commercial agreement with the dominant operator Ouibus, securing the co-operative's long-term future and partner profit return. The increased reliance on digital technology may make co-operatives less likely in the future - Norway's is smaller and France's has gone, both giving way to larger firms with resources for competition based on e-commerce.

8.3 Concluding remarks

Every market has its unique mitigating factors that affect the application and success of a legislative processes. However, in general terms the same macro level factors exist in each market that define medium to long term success; network spread and performance; continued financial resources, and; a firm's business model structure. Each has had an observable bearing on the success of legislation in each market to deliver its objectives. Arguably, the continued availability of financial resources has played the largest role in the consequential success of free-market economics and the use of contestability as a process.

8.3.1 Why deregulate a market?

There are two observable reasons for changes in legislative approach to deregulate a chosen market. Firstly, to provide the means to remedy an underperforming market operating with restrictive conditions and/or failing to be economically or operationally efficient. Secondly, a response to calls to widen the choice within the market and break the monopoly control on this sector by state entities which, through their own inefficiencies, fail to deliver adequate choice, price, or quality competition. In both cases the primary political goal will be to increase social welfare for the electorate as well as lower the financial burden to both the electorate through taxation.

Although some critics claim lower social welfare levels are created through free-market economics due to case studies showing resources being pulled to areas where they can most profitably be applied (in essence lessening the reach of the market) the net result in all studied markets is an increase in social welfare through new (or more frequent) journey opportunities, lower fares (at least at 'entry' level for customers), greater choice in provider (less pronounced in most studied markets over the long-term), and improved travel standards (both on and off board) – with these benefits also feeding through to parallel rail networks by virtue of the competitive environment.

In all studied markets the rail network has had an impact on market structure and performance, albeit at a low-level. As a substitute product in terms of point to point travel it has an important role to play in the consideration of inter-city coach

deregulation, as any substitute market does when considering deregulating a similar market. In the UK significant competition, even under state control, saw coach and rail passengers benefit from deregulation in general terms, but with an undercurrent of reduction in social welfare in less densely populated areas, for example in Cornwall. In most European markets rail has remained in state control, providing less immediate competition, and allowing domestic inter-city coach networks to develop, and markets to expand and contract. Consequently, entry of small and medium sized firms has been generally more sustained, such as in Sweden and Norway due to rail's latent reactions, poorer regional networks, and the emergence of niche market services to regional airports. However, in France and Germany, small and medium sized firm operations have fallen away quickly in most cases.

8.3.2 Are we left with a contestable market?

Government policy aims for deregulation across all the studied markets have focused on creating a competitive market place for domestic inter-city coach travel within a continually contestable environment. Legislation has been designed to allow each market to perform and react freely to opportunities. The removal, or considerable reduction, of entry and exit restrictions and processes that formerly protected rail has resulted in environments which meet the requirements for contestable market theory to be functional.

A contestable environment provides the potential for competition by allowing a threat of market entry to exist and be easily acted upon. A market may not appear highly competitive to buyers, but, in the background potential suppliers may be present and ready to enter the market with ease to take advantage of increased demand or complacent incumbent activity. Each of the markets studied is contestable, at least by the spirit of the legislation applied, and often in the observed operation of the market.

In each studied market relatively free entry and exit restrictions are bolstered by significant private and contract hire sub-markets, with potential suppliers having knowledge, skills, and available equipment.

This underpins conclusions regarding contestability, and is supported by Figure 25 which shows examples of market entry (and exit) following incumbents action;

Figure 25: Examples of market entry and exit across studied markets

Entry stimulus	Market example
Entry due to inflated prices	Megabus entry to the UK long-distance airport market - a near monopoly for National Express. Fares on airport services are higher than other routes due to lower rail competition at the UK's main airports and the higher levels of service needed to meet 24-hour airport operations. Megabus entered the Manchester, and London airport market with low fares and low frequencies.
Entry due to observable customer and profit gains	In all studied markets new entry has been significant on regional airport corridors where low-cost airlines proliferate. Customer loyalty is low and access to a domestic network less important. Fares and services are tailored to one-off use and these operational metrics encourage competition by all firms. Stansted Airport (UK) sees competition on the airport-London corridor between National Express and several firms. Entry has focused on fares and frequency. Aggressive competition has seen the airport authority licence space within its coach terminal - meaning competition for access instead of 'on-road'. The UK has also seen competition for commuter coaching. The Kent-London corridor remains highly competitive (coach/coach and coach/rail). The dominant national firms have had little impact entering the market only through acquisition.
Entry due to abnormal profits	First Group entered the coach market in the UK using the iconic American Greyhound brand. They chose already high frequency corridors with high loadings and profit levels on which to compete with the monopolist, National Express. Greyhound's entry forced the incumbent to re-align services and fares ahead of the launch to protect their position. However, long-term entry failed, and Greyhound left the market in 2013. This demonstrates the success of the freedoms allowed by contestability but also the flaws, with incumbents able to react ahead of new competition to deflect it and return to a monopoly.

Although examples exist of the success of the contestable environment there have also been instances where competition policy and contestability has potentially failed in the UK;

- firstly, the lack of market entry by independent operators in the late 1980s/90s when National Express consistently raised fares. This stimulated no new entry. Instead, National's revenue remained stable in real terms (rather than growing) due to high elasticity. Also, the reduced demand enabled capacity cuts which reduced total costs and offset this falling use and stable revenue position (White, 1999). At the same time intensive rail competition also deterred entry by new firms.
- secondly, even when quantity restrictions remain in place (such as Stansted and Luton Airports where the airport has decided which operator(s) to admit to the terminal area) survival is not assured. Stansted CityLink recently left the market even though its route was unique, demonstrating the fragility of the market and the need to ensure robust pre-entry financial models are developed.
- thirdly, some less tangible barriers remain; financial (sunk costs), and others such as innovation which have forced changes to the traditional methods of customer access and service delivery, have affected small and medium sized firms. Larger firms can be more dynamic and gain momentum through innovation, operational flexibility, and technology (e-commerce). For example, Megabus and their business plan allowing for three-years of decreasing losses.

While niche service entry (and survival) remains observed at a low level by smaller operators (for example New Bharat Midlands/Slough and Swanbrook Cheltenham/Oxford) it is unlikely to result in high revenue earning potential or a significant impact on the market. Most studied markets have settled to an oligopoly structure with potential for new entry but few realistic opportunities for this to be sustained.

Further exacerbating the situation and depleting the pool of potential entrants, are the business models used by large firms. These divert the attention of smaller firms away from the open market as they instead compete for branded service contracts. These opportunities represent potentially lower risk operation for these firms, dependent on the contract terms and the firm's appetite for financial risk. While these firms must still get their base costs 'right', contracts widely exist, ranging from very low risk (cost per mile contracts) through to high risk revenue-share arrangements. This has seen large firms such as National Express (who use over 30 third-party contractors in the UK) and FlixBus (who has over 300 partners across Europe and six in North America (Bus & Coach Buyer, 25 May 2018) become monopsonists, leveraging the quality available in the private sector. Swebus Express has reduced the threat of competition by partnering with firms who would otherwise compete with them - this widens their network and sees customers benefit from increased connectivity. In France, Starshipper has chosen to merge with Ouibus, becoming part of the its network and agreeing long-term profit return agreements for each co-operative partner. With competition quelled in this way, large firms focus on wider network innovation, fare levels (in competition with each other and rail), capacity management, and new forms of service delivery and customer access. In turn, this moves the market further out of reach for smaller firms with their potential to enter in their own right lessened. However, it does see the market meet original policy objectives for choice, quality, and low costs.

However, there are grounds to conclude that contestable behaviour plays a continuing role in shaping markets. The continued threat of entry has ensured that incumbents focus on fares, service levels and quality. In France, prior knowledge of liberalisation saw SNCF develop Ouibus. In the UK, expansion by Megabus into the airport market has shown contestability to work and the dominance of National Express in a sizeable and growing market challenged by Megabus who have found National Express potentially complacent. Regardless of the activity of smaller firms there does perpetuate a contestable market, and this continues to enable new expansion, development and innovation in areas critical to the latest trend in 'real-time' consumer values.

8.3.3 Has deregulation created innovation?

Deregulation in each market has created significant and progressive innovation. This has had mixed fortunes for small and medium sized firms with recent innovations potentially isolating them further from direct entry.

It was the smaller firm market sector in the UK that innovated significantly at deregulation. Prior to the Act, the domestic national network was in decline, services and coaches were basic, and fares high. However, network coverage was significant and justified state control. At deregulation, National Express was afforded freedoms to reconfigure the network, moving resources to corridors with more profit potential and defending its position on others by fares competition. Where small and medium sized firms entered the market on the back of low fares, fierce competition quickly saw the entrants removed. But, where firms entered the market with a different product proposition, much higher success was seen. Examples include Cotters of Glasgow (Anglo-Scottish), Trathens (West Country to London), and in later years Armstrong Galley (North-East to London). In each case, increased levels of in-service quality and commensurately higher fares saw longer-term success. This worked well for these operators, who originating from the private-hire market, were used to delivering customer centric services. In some cases, National Express partnered or absorbed the higher quality services into their own network (Trathens), while other entrants eventually succumbed to increased competition through a new level of quality developed by National Express (Rapide) but coupled to continued low fares.

While physical service improvements secured immediate market share the impacts lessened over time. Many new facilities became standard and the 'customer' also changed. These are now focused on digital accessibility and convenience with speed and price remaining important amongst a broadly similar demographic. With the move to digital and e-commerce platforms coupled with a change in customer expectations, new barriers have been created for smaller firms.

However, physical innovation in this way has also restarted the market structure cycle. The new opportunities observed as occurring, stimulating not only new facilities but new operators, are below;

- Stagecoach Gold - an experiment in offering increased quality over standard services and, for a short period, dedicated sleeper coaches on Anglo-Scottish services. The latter services have been discontinued for cost reasons though day-time Gold services remain within Scotland.
- In the UK, a new form of virtual service provider, Sn-ap, has emerged, harnessing the latest digital technology, and using crowd sourcing techniques to understand demand and match people with journey opportunities. Sn-ap is drawing on the private hire market as sub-contractors and although the services are in their infancy this proposition shows the room still available for innovation in the market.
- In response to changing customer priorities National Express are currently rolling out three innovations; seat reservations, premium seating areas (double deck coaches only), and extra legroom seats. These are designed to segment customer groups, drive additional profit on popular routes, and provide a new proposition on highly contested corridors such as Bristol - London.

Above all other innovations technology (and e-commerce) has been the main enabler. It has removed barriers for entry, managed passengers, and created brand awareness – but it has also created new barriers which independents struggle to overcome (e.g. skills and financial resources) to run e-commerce systems. As markets have opened to competitive freedoms technology has developed - this having a significant effect on the way markets evolve. The lack of technology helped National Express retain its dominant position in the 1980s, however, more recently FlixBus has used social media, e-commerce, and yield management to operate with few overheads, entering new markets at low cost, quickly winning market share and becoming a significant player.

Technology, therefore, has become a significant enabler in recent years. The advent of e-commerce as a reliable platform from which to launch and operate businesses of nearly every type has seen transport providers turn to digital technology as a low-cost model of market entry with the potential for near maximum product exposure. Developments of this nature in the inter-city coach market followed those of low-cost airlines in the United States of America and across Europe. At a stroke technology of this kind changed the market place for coach travel, with the need for on-street and call-centre based ticket sales eliminated together with the sunk and ongoing costs associated with them. Entry of Megabus into the UK market in 2003 demonstrated the success of this approach, and in more recent years it has been tech-savvy giants such as FlixBus with their 'Uber style' operations that have captured market share and the imagination of a new type of coach customer. However, FlixBus is an umbrella firm - a single brand operation that is reliant on smaller firms to operate the branded network it sells. FlixBus, like National Express, has in this way provided an attractive sub-market for small firms to operate within, removing the direct risks of revenue and competition from these firms in return for their complicity and acceptance of a set contract price. Safety in this form has seen many smaller firms reject opportunities for own-branded market entry and the next generation of 'crowd-sourced' virtual operators such as Sn-ap will only exacerbate this situation as they look to smaller firms to resource these new services.

8.3.4 Cost structure within the industry

E-commerce has stimulated cost structure change since the early 2000s. This period saw entry by Megabus into the UK domestic inter-city market (2003) and a shift towards kerb-side boarding and alighting - a contrast to the traditional use of dedicated terminals. These changes effected fixed overhead costs of operation as well as the derivation of fares and were highly popular with the largest passenger group - students.

At deregulation in the UK market one strength of National Express was its large network of national ticket sales agents and its use of bus stations, including exclusive access to London's coach hub Victoria Coach Station. This became a significant barrier to entry for many firms, both independent or as part of the

British Coachways consortium. At this time the industry saw significant fixed costs linked to ticketing systems, facilities, and terminal use together with sunk costs for market entry including brand awareness, marketing, communications, and new ticket sales networks.

E-commerce has removed many of these barriers to entry, such as fixed ticket agents and issuing costs. Using the internet as a sales and marketing platform all firms had the ability to reach a large audience quickly and cheaply. Learning from the low-cost airline industry, e-commerce also supported yield management systems and allowed much faster changes to price levels within the market - something that was only realistically achieved in unison with the internet as a sales and marketing platform. With significant barriers to market entry removed and lower costs of the internet as a business platform realised it should follow that smaller firms would find it easier to enter the market. However, while older barriers and fixed costs were removed, new barriers emerged in terms of time and skills costs to develop and manage e-commerce channels, and this has only ensured easier market entry for well resourced and larger firms.

Economies of scale are linked to cost structures and are a potential long-term outcome of liberalisation. Referenced throughout the research, the conclusions that can be drawn from the studied markets are that potential economies of scale (or at best advantages of scale) within operations may exist due to the presence of a few, large firms in each market instead of numerous single corridor operators. Critical to this outcome is the 'network effect'. Not only does this allow centralised fixed overheads to be spread across many more services, helping the revenue impact of these to be lessened, it also allows operational cost efficiencies for crew and vehicle movements. In the UK, National Express increases the utilisation of crew and vehicles by creating two or three-day cycles that work a contractor across the network on routes not always linked to their home location. This minimises unproductive time and maximises resource efficiency but is only possible due to the wide range of routes operated. This saves costs for additional resources and means a significant network of services can be maintained with fewer vehicles. In terms of costs, there is little evidence to support economies of scale with regard to lower costs per vehicle mile as third-party contractors currently offer few, if any, cost savings based on the quantity of work they

undertake for the umbrella brand. However, it is arguable that economies are found in terms of higher load factors leading to lower costs per passenger mile (effect is due to higher occupancy at a given vehicle-mile unit cost) due to the significant brand awareness (attracting many passengers) and market power (through aggressive use of yield managed fares) that the large firms exhibit. Where firms have invested significantly in larger vehicles further reductions in cost per seat mile can be found using equivalent crew and vehicle resources being spread over ten or more additional seats.

Cost efficiency is an important product of the contestable environment. In the UK, the threat of entry by FlixBus is affecting Megabus and National Express. Both are rationalising their operations and focusing on fares and innovation. The term 'fortress UK' has been used - an indication that the threat of entry is forcing the market to remain lean and efficient with spin-off customer benefits.

8.3.5 The impact of market structure changes within the industry

Deregulation (liberalisation) in all studied markets has seen varying degrees of structure change dependent on the time that has been available for the market to mature. Each market has been observed to pass through more than one structure and in nearly all cases the markets have settled into an oligopoly (Sweden, Norway, France) or a variant of this market structure (UK; Dominant Firm Oligopoly, and Germany; Non-coercive Monopoly) after starting out as a controlled monopoly and at liberalisation being close to an imperfectly competitive market in the short-term.

An oligopoly is by default a structure that sees choice provided by a small number of large firms, allows product differentiation and innovation, and sees profits tend to normal. The market is typically settled, however, if abnormal profits or movement into a new supply area occurs this will be challenged by existing firms or new market entry (where legislation allows a contestable environment to prevail). The danger, however, is the potential for 'hit and run' entry - where the market is shocked back to equilibrium by sudden entry (and often exit) of a new supplier even where this may create difficulties for buyers - particularly in public facing markets.

The type of market structure has a direct effect on the level of small and medium sized firms that operate within it. A perfectly competitive market is the utopian form and a structure that contestability pushes any market towards. Where a market can operate near perfectly, it supports many small suppliers - the UK road haulage market being a close approximation (Nash, 1982). However, sustained entry into the inter-city coach market requires a number of factors which favour larger operations to ensure profitability. As such, while pockets of niche market success with small and medium sized firms are evidenced (Berry's Somerset/London operation) the market structure that ensures an inter-city market survives in the long-term does not suit multiple smaller firms playing a direct supply role on all corridors.

The impact of some market structure forms regarding small and medium sized firms can be obstructive in terms of their ability to enter the market in their own right and juxtaposed to past policy aims. For small numbers of large firms to operate, the liberalisation process has seen the use of business models that rely on sub-contractors to supply the market as a by-product of the process and this in turn has provided lower risk entry into the market for these firms (as seen with National Express and FlixBus). In contrast, Megabus uses a majority of internally sourced vehicle and driver resources and its financial strength sees small and medium sized firms unable to directly compete alongside its operations. Megabus' low fares policy further excludes new entrant activity and allows only established operators to compete and deter moves to a monopoly position.

The inter-city coach market contrasts with the local bus market in the UK where a structure more akin to imperfect competition is widespread. This supports a larger number of small and medium sized firms, primarily due to the localised nature of the operations, the level of supporting sub-markets for local contract work (public and private) and lower financial resources needed to offset lower revenues achieved. The inter-city market stretches operators significantly. The lower seat turn-over requires a wider network and more efficient capacity management to ensure revenues meet financial resources outlaid. The closest approximation to the local bus market is the commuter coach sector - for example the Kent/London market.

8.3.6 The ongoing nature of competition within the industry

Open and ongoing competition has been the primary goal of policies pursued by governments in each market. In all cases competition has been present following liberalisation - this at first being intensive before settling to fewer firms but continued active competition and an underlying competitive threat. This is highlighted in Figure 26 below which has been created through the research to show the cyclical nature of market structure change in a liberalised market.

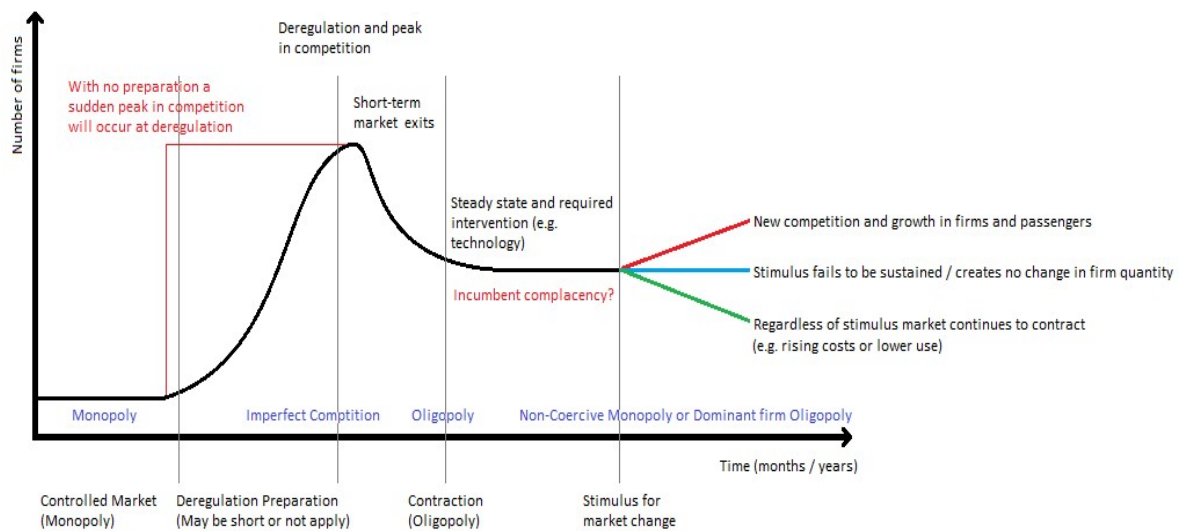
In all markets competition has focused on price, with other forms of competition being more sporadic. Firms have remained price makers as each market is not perfectly competitive, instead settling to an oligopoly. However, with new 'virtual' providers emerging there is a potential that buyers may move closer to price makers, forcing a shift in structure towards perfect competition - Sn-ap (UK) is already founded on buyers dictating journey time, the routes taken and influencing fares charged by trip utilisation. In Figure 26 this next potential phase is depicted by the upward trending (red) line after 'stimulus for market change' following initial settlement to an oligopoly.

E-commerce and observations of the low-cost airline sector have seen coach firms offer more standardised services in terms of vehicles, on-board facilities, and frequencies. Innovation instead focuses on customer accessibility and the real-time reaction of the seller to the flow of buyer demand - stimulating new entrants like Sn-ap. These techniques are a more dynamic form of competition, requiring considerable financial and time resource by each operator to push for market leadership. However, passenger reactions have remained highly price-elastic, close to -1.0, in the long-run meaning that any entrepreneurial activity needs to be price focused for long-term sustainability and this, in some cases makes entry short lived in the market - for example EasyBus' entry into the airport market and shown by the blue line in Figure 26.

These two outcomes from competitive activity show that market structure changes can be cyclical. Figure 26 seeks to capture the movements over time for a newly liberalised market based on observations from researched markets. Figure 26 shows the process for the initial cycle following liberalisation (starting

at (state) monopoly) and moving to oligopoly (as seen in each studied market except Germany). Critically, the cycle restarts at the point of oligopoly with suitable stimuli, and the process can then be viewed as a recurring cycle - the length varying dependent to the success of the stimuli causing the cycle to restart.

Figure 26: Proposed cyclical nature of deregulated market structures



While two examples of competition have been described, further examples of potential stimuli exist;

- firstly, a sudden rise in profits in the market may stimulate short-term 'hit and run' competition, quickly returning the market to equilibrium and an oligopoly state; or,
- secondly, the stimulus may be more complex, involving a significant legislation change and prolonging the cycle time before seeing the market move back to an oligopoly, or a new market structure.

Germany is a notable exception to the process followed by all other studied markets. Its rapid move back to a monopolistic market is an example of the downward trending (green) line shown in Figure 26. In Germany the market moved quickly to oligopoly and further mergers (Chapter 7) saw the market stabilise as a monopoly. However, this was not a return to an original state as there was no pre-liberalisation network. In contrast France, who liberalised after

Germany, has not followed the same path. Despite significant market activity by FlixBus and heavy use of e-commerce by all entrants France has benefited from the faster reactions to competitive threat by state rail who put in place a small network ahead of liberalisation firm, albeit young compared to pre-liberalisation examples seen in the UK and Norway.

For newly liberalising markets, the cycle in Figure 26 will be observed where a competitive environment persists. The final resting position of these markets (and already liberalised ones) will be determined by future advances in automotive and management technology. The success of large providers in entering newly liberalised markets will depend on efficiencies through scale and brand knowledge being realised. Each represents stimuli for cycle change and as seen in the studied markets, stimulus has already caused market states to alter (in most cases only slightly) but with the potential for further change and a movement to an imperfectly competitive state if sustainability can be attained in the face of incumbent reaction to new 'virtual' competition.

8.3.7 Concluding Remarks

By reviewing the UK market across 35 years it is apparent that the market has seen cyclical movement through two structures; monopoly and imperfect competition, before settling to a third - the dominant firm variant of oligopoly. Stimulus through e-commerce restarted the cycle and has seen the market move to a more competitive standard form of oligopoly with two firms largely sharing the market. With this regard, entry for smaller firms is unlikely with such dominant networks and predatory pricing employed on most corridors. Entry is restricted to niche markets, opportunities made available by licensing authorities (such as airports), and contractual work for network operators.

The market structure outcomes of the studied markets have, in all but one case, seen the process of liberalisation also result in an oligopoly - providing passenger choice and market stability. In Germany a non-coercive monopoly structure has emerged with one operator controlling 90% of the market. However, market contraction has been increasingly intensive as years have passed, this being aided by significant advances in digital technology.

In all markets contestability is in evidence. It has enabled each market to move through different structures and has remained in place to counter excessive profits and deter monopoly formation. In Germany, the market remains contestable even with the 90% market share of FlixBus, and though new entry is harder it is still observable on isolated corridors, such as the airport market (like opportunities still exploited in the UK market). In France, FlixBus has not been allowed to expand rapidly due to competition from state supported Ouibus (SNCF). In the UK incumbent firms (all plcs) have used cost efficiencies to ensure a 'fortress UK' approach is used against FlixBus.

The process of deregulation in the UK market, and across all studied markets has seen several economic effects. In concluding on the primary research question, the following points affecting the relationship between small and medium sized firms and these economic effects are notable:

1. Within each market advantages of scale have been observed with potentially lower cost per passenger-km due to higher occupancy. Scale has helped larger firms to strengthen and expand networks, making non-linear revenue gains *vis-à-vis* additional resources outlaid aided by 'network effect' and brand recognition. Smaller firms have been unable to use scale to achieve entry. Instead most use seasonal spare resource for experimental entry – e.g. UK deregulation in October 1980 which saw entry in the winter followed by significant exit by the following spring.
2. CMT sees the relationship between price, normal profit and cost closely related, with excessive profits being deterred by the threat of new entry. All incumbent firms seek efficiencies, exploit scale to ensure low prices on core corridors, and use price discrimination on corridors where monopoly supply exists and where scope extends to cases other than monopoly (e.g. exploiting lower elasticities for travel at certain times, such as holiday peaks). Contestability creates freedom for these actions, however, such actions may then create new barriers to entry for smaller firms who then only have the opportunity for entry at the micro level where higher prices and monopolistic activity prevails. It is arguable then, that assumptions within CMT that barriers can be made very small may be unrealistic.

3. Deregulation has caused churn at route and passenger level – akin to the US airline market (Kahn, 1988) with significant and ongoing churn coupled to coach passengers' high price-elasticity leading to high inter and intra modal shift. Technology through yield management has seen fare differentials and predatory pricing by large firms sustain passenger churn, lower brand loyalty and mode shift. At the same time, to minimise churn and retain passengers some firms (and modes) have used measures such as discount cards for target groups that are only valid on their services. However, route level churn falls as the market matures although fewer new links are made. For smaller firms, these economic effects make entry into core markets difficult but do present opportunity for entry where monopoly activity occurs, and the new entrant can find a niche.
4. Deregulation needs the economic effect of the contestability process to function effectively. It creates the potential for; competition to exist; barriers to entry (and exit) to be lowered (or removed); and, hit and run competition (one of the safeguards against abnormal profits and monopoly operation).
5. Lack of success of CMT can be measured by the level of abnormal profits. A perfectly competitive market has normal economic profits (total revenue = total cost including opportunity cost where it is accepted that this is seen as a normal return on capital – arguments regarding this are notable within the UK Competition Commission enquiry into local bus services, 2011). However, the accounting definition (which takes no account of opportunity cost) allows for revenues to be greater than costs. While contestable each coach market is perfect - and while data for National Express (Figure 17) shows accounting level profits are made (super normal (or abnormal) economic profit) the level of abnormality is low due to contestability. However, while current National Express return on sales (ROS) margins are good but not abnormal (c10%), there is post-deregulation evidence of very high return on investments (ROI). This is not a failure of CMT but due to historic differences in asset management. In the early years National Express owned and operated very few vehicles, contracting in around 80% from third-parties (Robbins & White, 2012). As a result, a high rate of return on revenue achieved was generated (c30% in 2000). However, a move

towards standardised vehicles, increased ownership of vehicles by the firm and a mix of owned operation and vehicle leasing to third-parties (to maintain standard vehicles) has seen ROI fall. The data also shows a step-change in profit after 2003 (entry of Megabus) and a new steady state thereafter with margins unaffected by competition (Robbins & White, 2012). This is likely due to an expanded passenger market (increased demand) driven by competition and continued focus on operational efficiency and price. As a result, few opportunities for smaller firms exist due to intense competition and use of yield management but contestability has not failed even though the threat of smaller firm entry is reduced.

6. Social welfare may also be a measure of CMT success. Maximised social welfare, a principle aim of deregulation seeks to; increase choice; lower cost and price; and, increase efficiency. While markets have seen falling fares and service increases, few have seen the multi-operator environment develop - instead each has contracted to at best oligopoly. Fewer firms are, arguably, better for social welfare due to the network effect and stability they create. There is potential for better spread of costs over resources and the ability to better compete with all modes. However, deregulation can see diversion of resources to core corridors and vacuums left in provincial areas. This occurred in the UK, with main corridors benefiting (an increase in welfare), but lower density areas (e.g. Cornwall) suffering from fewer services and a decrease in welfare. However, an argument exists for wider benefits of these actions with lower fares seen by rail users in response from coach competition – seen as a user benefit and social welfare increase (Douglas, 1987). Policy makers must plan for this, and while the UK did not, there is evidence other markets have (e.g. Norway retaining subsidies for some routes and Germany's state ownership of rail seeing regional network improvements).
7. Resultant market structure models have settled broadly to oligopoly. This has seen fewer suppliers to the market than envisaged but is beneficial in terms of; better likelihood of economies of scale; increased allocative efficiency; lower prices; and, benefits driven through 'network effects' and a maximisation of social welfare.

8. Market concentration has been hastened in recent years through technology advances that have better enabled allocative efficiency and price competition. Revenue management systems and yield management techniques have been coupled with internet and social media platforms to maximise passenger loads, profits, and customer satisfaction. Smaller firms have struggled to keep pace with the application and cost of this technology even though its presence in the market has significantly reduced physical barriers for entry.
9. Deregulation has created competition. However, if competitive attrition sees one firm exit the market, remaining operators benefit through latent demand (the additional demand created by competition). However, this is more likely to be consumed by existing firms than new entrants due to advantages of scale and therefore competition, over time may mean market contraction (e.g. Cheltenham/London where Megabus has left the market and National Express increased their service level to meet latent demand and become the monopolist again).
10. Monopsony markets have been created by large 'umbrella-brand' firms to provide protection from competition - but this can bring diseconomies of scale. When monopsony firms create self-imposed entry barriers (as they strive to increase technology within the business, create a consistent brand image, and use standard equipment) the situation may turn to a negative position as successful suppliers become 'super-size' and use their own advantages of scale to win increasing levels of work, often at less competitive prices (not passing on scale advantages) to the 'umbrella-brand' firm. These super-suppliers may also enter the market in their own right and with lower costs due to investments made (and paid for) through contract work. Furthermore, barriers to entry become higher for new and smaller firms aiming to work for 'umbrella-brand' firms - a paradox given the desire of these firms to operate within a free-market and create a controlled competitive private market for their services that is keenly priced through multiple compliant firms bidding at the contract stage - not so common now owing to super-supplier presence.

In answering the primary research question, several policy recommendations have emerged that may assist future market liberalisations and currently liberalised markets mature further. These recommendations are summarised as:

- The removal of protective financial structures (ahead of liberalisation);
- The removal of rail protectionism;
- Ensuring equitable access to facilities; and,
- The development of efficient route networks that maximise social welfare.

Finally, Figure 27 provides a summarised response to the research hypothesis and each additional sub-hypothesis that has emerged during the work with summary material drawn from the wider research (Chapters 1-7) and conclusion (Chapter 8);

Figure 27: Research hypothesis testing and conclusions summary

Hypothesis / Sub-hypothesis	Commentary
Given the freedoms allowed for market entry and exit through the 1980 Transport Act why is there little or no activity within the UK inter-city coach market by small and medium sized coach operators?	Advancing technology has provided new opportunities as well as barriers. The market is still highly price-elastic, revenue yields are low, operating (fuel and labour) are high, and competition remains focused on price. Two large, low-cost, networks split the market. One of these firms has created a monopsony market that attracts smaller firms to work under contract instead of competing directly. Sunk cost and knowledge barriers remain and market entry is only possible on well researched niche corridors or where access remains licensed (e.g. some regional airports).
Is the UK market a demonstrable success of contestable market theory but also a failing of Government objectives regarding choice and quantity?	The market is contestable as demonstrated throughout the 35-year period of deregulation and most recently with the entry of Sn-ap. Free market economics rather than policy have dictated the shape and quantity in the market and as such Government objectives have not failed. However, in hindsight more should have been done at deregulation to lower entry barriers and limit the immediate power of the incumbent (pre-liberalisation) network operator.

Hypothesis / Sub-hypothesis	Commentary
<p>Has the resultant UK market structure led to an internal monopsonistic market structure within a wider external monopoly or oligopoly market structure?</p>	<p>Yes, the business model used by the largest operator in the market, National Express, has led to a private monopsony market forming and with 30 contractors operating across the network. FlixBus have used the same model in Europe, enabling it to move very quickly into new markets and roll out consistent services and brand - this lowers the lead time for market entry (no vehicle purchasing and staff recruitment) and makes it harder for smaller firm entry.</p>
<p>What critical factors are required to; exist; remain, or; be delivered with, liberalisation to enable long-term competition to exist?</p>	<p>Equitable access to technology and terminals are the main critical factors that need to exist throughout the liberalisation process. Ideally, the removal of pre-existing networks and large firms should occur, however Germany may suggest otherwise. Rail ownership is less important but of note are those examples where state rail funding has aided fares based competition, even if indirectly.</p>
<p>Following sequential liberalisations across Europe what similarities exist and what lessons can be drawn from each process?</p>	<p>In most cases some form of network has existed prior to liberalisation - even in Germany with routes radiating from Berlin. As a result, all markets have settled as an oligopoly except for Germany where mergers have seen a dominant network emerge and a 90/10 split of market control. In all cases the ownership of rail has had no real bearing on the success of inter-city coach. However, the increasing role of technology and changes in customer expectations and mobility have seen differing speeds of consolidation and a common barrier to entry for smaller firms. Lessons remain linked to financial resources, market composition prior to liberalisation and the application of equitable customer interfaces after liberalisation laws are passed.</p>

In conclusion, the role of the small and medium sized operator remains largely at odds with the original aims of deregulation. While all studied markets are clearly contestable with smaller firms providing the theoretical competitive threat to help the market stay in equilibrium, there still exist significant entry barriers for such firms. Success of market entry for smaller firms is seen on niche market corridors and where a level of quantity (licensed) restriction still exists - such as access to airports operated by private companies.

The current role of smaller firms can be defined as providing; a pool of resource for larger firms (pre-existing or new to the market); theoretical threat of entry to maintain market equilibrium; niche market services where they can enter the market on equitable terms, and; innovation in traditional in-service delivery where this is sustainable at higher fares and/or due to 'home' market loyalty (Berrys Superfast or New Bharat, the latter serving specific ethnic communities). The future of smaller firms in the scheduled long-distance market remains uncertain - the internet is a low-cost entry platform and increasingly customers are looking for real-time 'crowd sourced' travel opportunities, However, technology to coordinate this is currently prohibitive and would require wider and lower cost availability for smaller firms to independently enter the market at volumes sustainable to long term survival.

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